



NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SATELLITE SYSTEM (NPOESS)

**NPOESS Common Interfaces and Services
Interface Control Document - Volume 1: External**

D34659-01 Rev D

CDRL No. A009

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This document has been identified per the NPOESS Common Data Format Control Book – External Volume 5 Metadata, D34862-05, Appendix B as a document to be provided to the NOAA Comprehensive Large Array-data Stewardship System (CLASS) via the delivery of NPOESS Document Release Packages to CLASS.

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NPOESS Common Interfaces and Services Interface Control Document - Volume 1: External

D34659-01 Rev D

CDRL No. A009

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---	11/16/2007	Rev --- incorporates the following with ECR 673B: Splits Rev E of the document into two volumes, Volume 1 for external interfaces and services and Volume 2 for internal interfaces and services (ECR 574) The following ECRs are integrated: <ul style="list-style-type: none"> • 517C - Baselines the removal of the Precision Orbit Determination Interface • 560 – Updates API references • 573A – Removes SMMC reference • 574A – Updates ODAD • 587A – Baselines Key Management OpsCon directing PKI and GPS management services 	All
A	3/31/08	Rev A incorporates the following with ECR 717B: <ul style="list-style-type: none"> • Updated security document references • Updated wording for clarity and consistency • Removed the FTP from the C3S Extranet Web Server and updated web address • Added wording for AMMC clarification • ECR 687A: AMMC System Opscon Update • ECR 695A: SDS OMPS Sensor Upload Interface This version includes all the change pages from 699A which adds a DQM Ad Hoc Report to X_NP_NU-L00080, IDPS DQM Reports interface The following ECRs are also incorporated into this rev: <ul style="list-style-type: none"> • 694A which reflects the C3S element spec deletion 	Various
B	7/11/08	Rev B incorporates the following with ECR 798B: <ul style="list-style-type: none"> • ECR 726B: CERES Manifested on NPP • ECR 727: NPP CERES RDR Formats - CDFCB-X Vol. I DCO C4, D34862-01 and Vol. II DCO B3, D34862-02 • ECR 739B: NPOESS Mission Notices and DDS Checksum Files, D34862-06, DCO E1 • ECR 754A: Update to the NPOESS Site Comm ICD, Vol 	All

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		2 This version includes changes to the DDS and DQM I/Fs, ICD Clean up, and updates to the encryption data points.	
C	01/06/09	Rev C incorporates the following with ECR 865E: <ul style="list-style-type: none"> • ECR 830B: System OPSCON Update • Updated Title Page and RCR Page • Clean-up of ICD Common Template Throughout • Removed References to PKI interfaces that were removed in the last update • Removed the edit feature from the WRS, Authorized Users are can not edit a form. • Removed Examples of Auth. Users from Interfaces • Update Frequency in the C3S Extranet Web Data Table 3.3.1-1 • Changed the term "Field Terminal users" to "DRO Community" • Update the E-MSDS protocol from HTTPS to HTTP • Updated the E-MSDS Data List to be consistent with ECR 830B • Updated the ODAD Retrieval paths with information provided by the TOC • Removed paths for the QA truth data and added pointers to CDFCB-X Vol VI. • Updated the Data Delivery Request Constraints • Updated Appendix B • Changed the CERES LEO&A APID Telemetry Files to CERES APID Telemetry Files 	All
D	5/19/09	P-ASF DCO (ECR 888E and ECR 920B changes) ECR 944A incorporates the following: Updates per template changes Added data mnemonic C3_NU-L00040-040, Spacecraft Configuration Database Update, to interface X_NP_NU-LW0010, C3S Extranet Web Server.	All


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		Updates to AN_NP-L10330-003 reference in the Table 3.3.4-1, Official Dynamic Ancillary Data Reinstates HTTPS as the baseline protocol for the E-MSDS Interface Updates to Table 3.3.5-1, Orbital Support Data Updates to Table B-1, Interface Mnemonics Mapping Matrix ECR 943A: Adds two physical mnemonics to the SAN FS Service in Appendix B.	

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1.0 INTRODUCTION

This Interface Control Document (ICD) describes the external Mission Support Data (MSD) interfaces, common interfaces and common services for the National Polar-orbiting Operational Environmental Satellite System (NPOESS) and NPOESS Preparatory Project (NPP). Interfaces and services that pertain to more than one entity (one sender to multiple receivers or multiple senders and one receiver) are contained in this ICD to eliminate duplication and maintain the technical accuracy of the interfaces and services. The common interfaces defined in this document include the distribution of the NPOESS ancillary data, auxiliary data, messages and reports from the Command, Control and Communications Segment (C3S) and Interface Data Processing Segment (IDPS) to various users external to NPOESS. The MSD interfaces are for the distribution of MSD into and out of NPOESS. MSD includes all the data that is required to produce mission data products that are not on-board sensor-produced data and that is not delivered as part of the processing system software. Examples of MSD are ancillary data, auxiliary data, messages, reports and quality assurance truth data. The common services are defined as modified interfaces in this document to identify standard products or Commercial Off-The Shelf (COTS) products being used by NPOESS.

1.1 Document Overview

1.1.1 Standard ICD Sections

Section 1 Introduction – Provides a brief overview of the NPP and NPOESS programs, describes the document layout and defines the interface management.

Section 2 Applicable Documents – Lists document references and identifies as compliance or reference documents, as well as, defines the ICD Data Package. It also establishes an order of precedence in the event of conflict between two or more documents.

Section 3 Interfaces – Establishes, defines and characterizes the NPP and NPOESS interfaces.

Section 4 Reserved

Section 5 Interface Verification – Identifies the interface verification methodology.

Section 6 Operational Agreements – Identifies any operational agreements, memorandums of understanding, Memorandums of Agreement (MOA) or technical implementation agreements affecting the implementation of any applicable interfaces in this ICD.

Appendix A Requirements – Provides a matrix of all associated segment-level requirements and maps them to the related interfaces defined in this ICD.

Appendix B Interface and Data Mnemonic Mapping Matrix – Provides a matrix mapping all logical interfaces to the associated data flowing across the interfaces and to the associated physical interfaces.

Appendix C Document Specific Acronym List – Provides a list of acronyms unique to this ICD. All other acronyms are identified and listed in the NPOESS Acronyms, D35838.

Appendix D Reserved

1.1.2 Unique ICD Sections

There are no unique sections in this ICD.

1.2 Scope

This ICD establishes, defines and characterizes the logical interfaces and services listed in Table 3.1.1-1, Interface Listing for NPP and NPOESS. NPP or NPOESS specific interfaces are identified accordingly within the interface descriptions. The interfaces defined in this document are designed, specified and controlled by NPOESS. The common services defined in this document are products that are being used by NPOESS and compliant with industry standards or are COTS products.

The MSD interfaces include the retrieval of Official Dynamic Ancillary Data (ODAD), and Quality Assurance (QA) Truth Data into NPOESS. Static ancillary data information is defined in the NPOESS Integrated Support Facility ICD, D37032.

This ICD defines the common interfaces between the C3S Extranet Web Server to Authorized Users, the IDPS/External MSDS (E-MSDS) to users, the Comprehensive Large Array-data Stewardship System (CLASS) and NPOESS to make requests to and retrieve data from CLASS for archived NPOESS operational data and for data from the Data Quality Monitoring (DQM) to Authorized Users.

The common service documented in the ICD is for the Storage Area Network (SAN) File System (FS) Management Service.

This ICD has multiple data items flowing across the interfaces. Most interfaces reference a table that defines a list of data specific to that interface. The data formats and structures are defined in the NPOESS Common Data Format Control Book-External (CDFCB-X) Volume VI, D34862-06. The file naming conventions used for the data listed in the interfaces are found in NPOESS CDFCB-X Volume I, D34862-01.

A complete discussion of interactions, including mission threads, is located in the NPOESS Operations Concepts Document (OPSCON), D31400. For a description of the NPP/NPOESS Architecture, refer to the System Architecture Definition Document (SADD), D31399.

1.3 NPOESS Overview

NPOESS collects, processes, and delivers global multi-spectral radiometry and specialized meteorological, oceanographic, and solar-geophysical data to operational users, which includes the National Oceanic and Atmospheric Administration/National Environmental Satellite, Data, and Information Service (NOAA/NESDIS), the Air Force Weather Agency (AFWA), the Naval Oceanographic Office (NAVOCEANO, also known as NAVO) and the Fleet Numerical Meteorology and Oceanography Center (FNMOC). The data is also provided to worldwide-deployed field terminal users and the environmental remote sensing scientific community.

NPP is a joint program between the National Aeronautics and Space Administration (NASA) and the NPOESS Integrated Program Office (IPO). NPP provides continuity of remotely sensed data measurements supporting the research of long-term change in the global climate. This is accomplished by extending the measurement series being initiated with the Earth Observing System (EOS) Terra spacecraft Moderate Resolution Imaging Spectroradiometer (MODIS) instrument, the EOS Aqua spacecraft Atmospheric Infrared Sounder (AIRS) instrument and the Advanced Microwave Sounding Unit (AMSU) Programs.

The NPP and NPOESS are composed of four and five segments, respectively. These segments are: Space Segment (SS), C3S, IDPS, Launch Support Segment (LSS) and

Field Terminal Segment (FTS). FTS is an NPOESS-only segment.

The NPOESS program has three operating states. State 1 is the initial operating Risk Reduction Phase which operates with a subset of the applicable mission requirements. During State 2, both the NPP and NPOESS satellites operate throughout the concurrent portion of the NPP and NPOESS missions. In State 2, a subset of the applicable system requirements for the NPOESS mission are met. State 3 begins when the NPP mission is decommissioned and extends to NPOESS end of mission. During State 3, all NPOESS mission requirements are met. The NPOESS ground segment supports all three states.

1.4 Interface Definition and Description

The following section provides an outline and definition of the various entries (referred to as data points) used to define and characterize each interface specified in this document.

X.0 Interface Title

Interface Name	Provides the name of the interface. Generally, this is the same as the interface title.
Mnemonic	Identifies the mnemonic assigned to the interface. The mnemonic assignment is in accordance with the NPOESS Interface and Service Mnemonic Convention defined in Section 3.2, Interface Conventions.
Description	Provides a succinct description and purpose of the interface along with any other pertinent information regarding the interface.

X.1 OPSCON Scenario

System	This section identifies the respective system and segment scenarios pertaining to the interface. These scenarios are defined in the system Operations Concepts (OPSCON).
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X.2 Data Transaction and Response

Sender	The segment or entity that provides the message/information transferred across this interface.
Receiver	The segment or entity that receives the message/information transferred across this interface.
Response	Response, if any, applicable to the application level of the interface.

X.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	Provides content and format information for data transferred via the interface. Where content and data format are defined elsewhere, the document(s) containing this information is referenced.
Data Mnemonic	Establishes the data mnemonic(s) assigned to the data being transferred via this interface.

X.4 Protocol and Parameters

Protocol	<p>Identifies protocols involved in the data transmission.</p> <p>An example of applicable logical interface protocols is: FTP: IDPS initiates Push/Pull</p> <p>An example of applicable space-related physical interface protocols is: IEEE 488</p>
Parameters	<p>For logical Interfaces: Identifies all parameters required in the exchange of the message/data. This relates to the parameters required to implement the transmission of the message/data, but not the parameters contained in the message itself.</p> <p>For space-related physical Interfaces: Identifies all the signal/link characteristics such as Bit Error Rate, Effective Isotropic Radiated Power, randomization, convolution encoding, power rating, current rating, etc.</p>

X.5 Data Volume and Data Rate

Data Volume	<p>If there are no performance requirements for an interface, then volume is not applicable for this interface data point. Individual data file sizes can be found in the applicable Data Format Control Book (DFCB). If the interface has performance requirements (e.g., data has to be sent from sender to receiver in m seconds or all the data needs to arrive in m seconds), then volume is the sum of all data file sizes being transferred in a specified interval.</p> <p>The volume represents the minimum and maximum volume in a given interval.</p>
Data Rate	<p>Space-related physical interfaces: Data quantity transferred per second</p> <p>Note: Data Rate applies to space-related physical interfaces only.</p>

X.6 Interface Characteristics

Frequency	<p>For logical Interfaces:</p> <p>Delivery Frequency - The number of times each data item is transferred over the interface within a given interval.</p> <p>For space-related physical Interfaces:</p> <p>Contact Frequency – The number of contacts or number of periods the physical link is active.</p> <p>Radio Frequency (RF) – The RF of the signal defined in this interface.</p>
Timeouts	Specifies timeouts, if needed, for interfaces expecting or requiring a response from the receiver within a defined period or an error condition is generated and recovery procedures initiated (e.g., retransmissions).
Thresholds	Defines certain interface data initiated by a trigger or threshold mechanism (e.g., warning messages sent to the operator when a queue length exceeds some threshold).

X.7 Security

Client Authentication Required	Describes the client authentication requirements (e.g., login, user name and password)
Encryption Required	Specifies if encryption of the data is required and type of encryption (e.g., Advanced Encryption Standards) or if the data is source encrypted.

X.8 Priority and Constraints

Priority	Explicitly defines the priority, if established (e.g., based on user ID).
Constraints	Explicitly defines any constraints (e.g., data must be time-ordered by Virtual Channel Identification).

X.9 Effectivity

Interface Effectivity	<p>Identifies each state the interface is effective.</p> <p>Define as follows:</p> <p>State 1-NPP Only</p> <p>State 2-NPP and/or NPOESS</p> <p>State 3-NPOESS Only</p>
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1.5 Interface Management

The Government NPOESS IPO Level 1 Configuration Control Board (CCB) is the

Configuration Management (CM) authority for External ICDs. The Government External ICD stakeholders participate in this CCB since any change to an interface, of which one side is outside of NPOESS control, is a Class 1 change (as defined in the NPOESS System Specification, SY15-0007). Any subsequent change to external ICDs after the initial baseline requires a Class 1 Engineering Change Request (ECR) and approval by the Government NPOESS IPO Level 1 CCB.

The Northrop Grumman Space Technology (NGST) Program CCB is the CM authority for all inter-segment ICDs. The NGST CCB stakeholders participate in this CCB since any change on either side of an interface is considered a Class 2 change. Any subsequent change to inter-segment ICDs after the initial baseline requires a Class 2 ECR and approval by the NGST Program CCB.

After approval and release, the Configuration Management Office (CMO) performs the Data Management function and has responsibility for this ICD. ICD revisions are issued in the form of a complete document release or page changes, as applicable.

2.0 APPLICABLE DOCUMENTS

2.1 Compliance and Reference Documents

Compliance documents show conformity in fulfilling official program requirements. Compliance documents, whether Government or non-Government officially form a part of this document to the extent specified herein.

Reference documents provide additional information that may or may not be used to define an interface or service. In those cases where they are not needed to define an interface or service, they provide supplemental information, e.g., the NPOESS Acronyms, D35838. In this example, the reference provides the definition of the acronyms, but is not needed to develop an interface or service.

Table 2.2-1, ICD Compliance and Reference Documents identifies those documents referenced throughout this ICD, specifying whether they are compliance or reference.

2.2 Interface Data Package

An ICD Data Package is an integrated collection of documents to complete the entire interface picture. The documents contained in an ICD Data Package either provide the necessary compliance, reference or supplemental information needed to complete the definition and implementation of an interface or provides other interfaces needed by the user.

The ICD Data Package Documents Column of Table 2.2-1, ICD Compliance and Reference Documents, identifies those documents with an “X” which constitute the ICD Data Package for this ICD. Figure 2.2-1, ICD Data Package, is a graphical representation of the respective ICD Data Package.

Table 2.2-1, ICD Compliance and Reference Documents

Document Number	Document Title	Brief Description	Compliance /Reference	ICD Data Package Documents
SY15-0007	NPOESS System Specification	Defines the NPOESS and NPP system level requirements	Compliance	
D34487	Program Information Assurance Policy	Defines the security policies and procedures for NPP and NPOESS	Compliance	
D31399	System Architecture Definition Document (SADD)	Defines the NPOESS architecture	Reference	
D31400	NPOESS Operations Concept (OPSCON)	System level operations concepts upon which the design of the interfaces is based	Reference	
D34642	NPOESS Command, Control, & Communications to Interface Data Processing Segment Interface Control Document	Defines the inter-segment interfaces between C3S and IDPS	Reference	
D34651	NPOESS Field Terminal Interface Control Document	Defines the interfaces needed for the FTs to process NPOESS data	Reference	
D34862-01	NPOESS Common Data Format Control Book – External Volume I	Defines the file naming conventions of data transferred via the interfaces	Reference	X
D34862-06	NPOESS Common Data Format Control Book – External Volume VI	Describes the data content and format of data distributed via the external and/or inter-segment logical interfaces	Reference	X
D35836	NPOESS Glossary	Provides brief definitions of NPOESS specialized terms	Reference	
D35838	NPOESS Acronyms	Provides a list of NPOESS acronyms and their descriptions	Reference	
D35849-01-04	NPOESS Site Communications ICD Volumes I-IV	Defines the various physical interfaces supporting the logical interfaces	Reference	X
D37032	NPOESS Integrated Support Facilities ICD	Defines of internal interfaces between operational sites and the support facilities	Reference	

Document Number	Document Title	Brief Description	Compliance /Reference	ICD Data Package Documents
D41044	NPOESS Application Programming Interface (API) User's Guide	Defines the Application Program Interface module documentation	Reference	
RFC 2821	Internet Engineering Task Force - Dynamic Updates in the Simple Mail Transfer Protocol http://www.ietf.org/rfc/rfc2821.txt?number=2821	Request for Comments standards document defining the industry standards for SMTP dynamic updates.	Reference	
D34659-02	NPOESS Common Interfaces and Services Interface Control Document Volume II - Internal	Defines the common interfaces and services accessible to various Internal users	Reference	
SS23-0022	Field Terminal Technical Specification	Defines the specifications for the Field Terminal	Reference	
SY10-0003	IDPS Specification	Defines the specifications for IDPS	Reference	
SY12-0023	C3S Specification	Defines the specifications for C3S	Reference	
SY12-0027	NPOESS C3S Specification	Defines the NPOESS specifications for C3S	Reference	
D34650	C3S to SS ICD	Defines the interfaces between C3S and SS	Reference	
UG60822-C3S-004	EM WRS Users Manual	Defines the Work Request System	Reference	
D31405	NPOESS Security Implementation Plan	Defines the NPOESS era Security Implementation	Reference	
IG60822-C3S-084	SAN FS Setup and Configuration Document	Defines the configuration details for the SAN FS Management Service	Reference	
D31413	NPOESS to NOAA ICD	Defines the interfaces between NPOESS and the NESDIS Central and CLASS	Reference	
D34466	NPOESS to DoD ICD	Defines the interfaces between NPOESS and the DoD Centrals	Reference	
D34645	NPOESS to NPP SDS ICD	Defines the interfaces between NPOESS and SDS	Reference	

Document Number	Document Title	Brief Description	Compliance /Reference	ICD Data Package Documents
D41068	NPOESS to NSIPS ICD	Defines the interfaces between NPOESS and NSIPS	Reference	

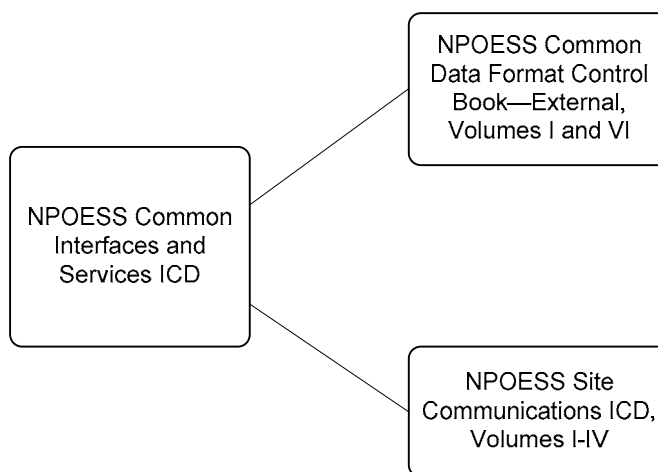


Figure 2.2-1, ICD Data Package

2.3 Protocol Versioning

The NPOESS System Specification, SY15-0007 identifies the version of protocols used for the NPOESS external interfaces that are annotated within this document.

2.4 Precedence

In the event of conflict between a compliance document listed in Table 2.2-1, ICD Compliance and Reference Documents and the contents of this document, the NGST SEITO organization in conjunction with the IPO shall resolve the conflict. For all Class 2 documents, the NGST SEITO organization shall resolve the conflict. In the event of a conflict between this document and a reference document listed in Table 2.2-1, ICD Compliance and Reference Documents, this document takes precedence.

3.0 INTERFACES

3.1 Interface Description

The interfaces defined in this document include interfaces for MSD coming into and being distributed from NPOESS, common interfaces for system ancillary data, auxiliary data, messages and reports that are made available to various users via the NPOESS servers (C3S Web Server and IDPS/MSDS), and for the Work Request System (WRS). NPOESS provides interfaces to External users. External users (e.g., Central users, Field Terminal users, CLASS, IPO, SDS, users of IDPS/DQM Subsystem data, etc.) are users who connect to NPOESS services via external firewalls. The majority of the interfaces in this ICD require the user to have prior user authorization. For the purpose of this ICD, the term “Authorized User” is used to specify circumstances where an account setup or prior approval is required.

This ICD documents the following interfaces:

- An external interface between the C3S Extranet Web Server and Authorized Users to make available specific system information and reports listed in Table 3.3.1-1, C3S Extranet Web Data.
- An external interface between the IDPS/E-MSDS and external users to make available non-sensitive system information and reports listed in Table 3.3.2-1, IDPS/EMSDDS Data.
- An interface for Authorized Users to access the WRS with or without attachments. The WRS is available via the Extranet Web. The WRS contains forms for Authorized Users to create, submit, view, and edit Mission Task Requests and Work Requests. The WRS also provides one avenue for users to receive and view Mission Notices.
- An external interface to retrieve ancillary data for NPOESS use via software that resides on the E-MSDS. The definition of this interface references Table 3.3.4-1, Official Dynamic Ancillary Data, which lists the data retrieved by this interface.
- An external interface for C3S/OO to manually retrieve orbital support data via the internet. The definition of this interface references Table 3.3.5-1, Orbital Support Data, which lists the data retrieved by this interface.
- Two external interfaces define how internal users make requests to and retrieve data from CLASS for archived NPOESS operational data.
- Three external interfaces define the distribution of IDPS/DQM ad hoc data, reports, and messages to a list of Authorized Users.
- A direct Internet interface to retrieve truth data from various external sources in order to evaluate the NPOESS Environmental Data Records (EDRs). The definition of this interface references Table 3.3.12-1, QA Truth Data, which annotates a predefined list of data items used by IDPS/DQM.

- An external interface defines how the Consolidated Data Delivery Report (CDDR) is transferred to Authorized Users

3.1.1 Data Flow

A data flow diagram is shown in Figure 3.1.1-1, Common Interfaces Data Flow, depicting the interfaces defined in this ICD. Table 3.1.1-1, Interface Listing, identify the logical interfaces defined in this ICD. This is a quick reference table to supplement Figure 3.1.1-1 Common Interfaces Data Flow. Each interface shown in Figure 3.1.1-1 Common Interfaces Data Flow., is labeled with a number that corresponds to the appropriate interface or service listed in Table 3.1.1-1, Interface Listing.

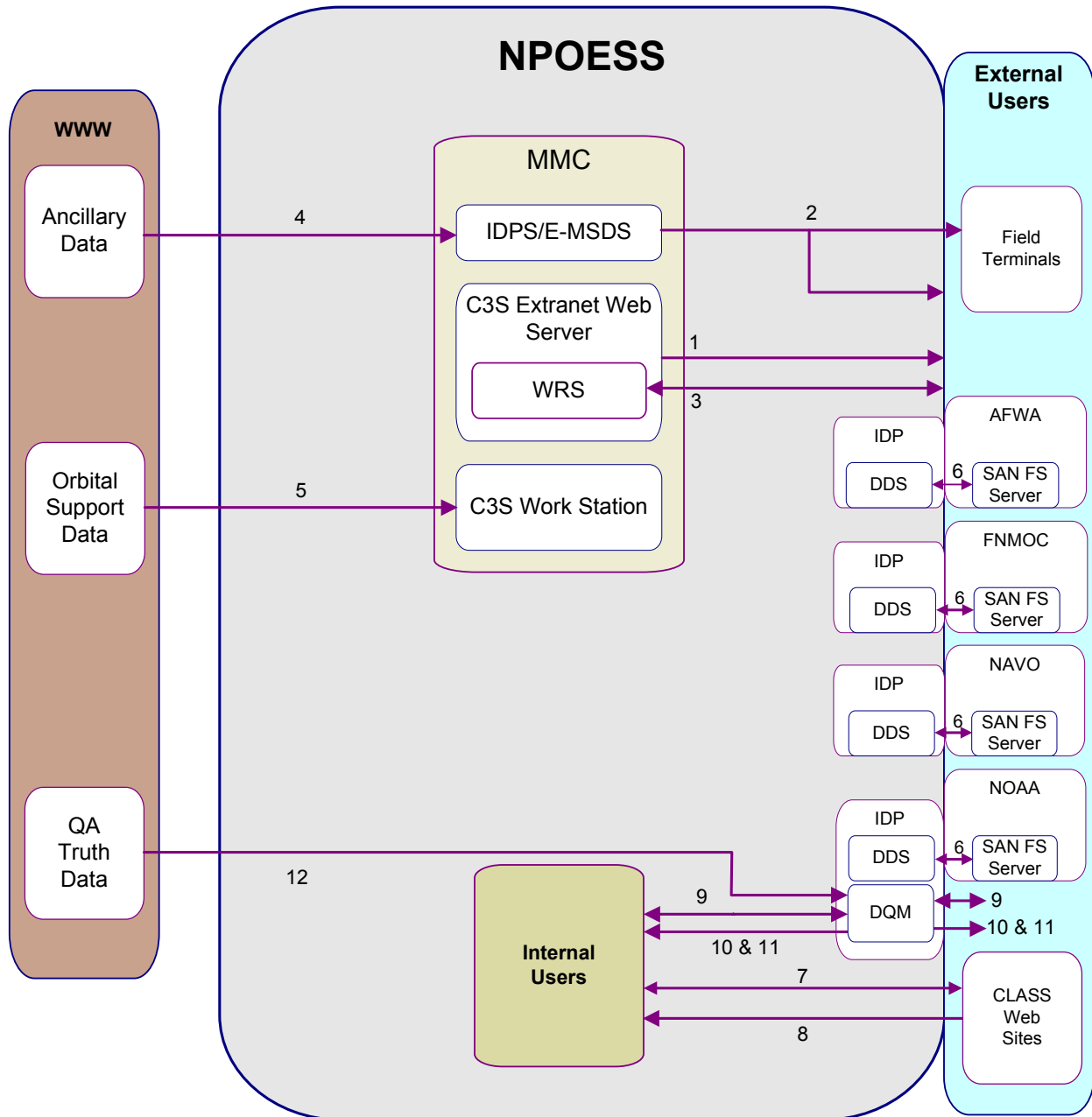


Figure 3.1.1-1, Common Interfaces and Services Data Flow

Table 3.1.1-1, Interface Listing

#	Interface	Interface Name	Source	Destination	Document Location
1	X_NP_NU-LW0010	C3S Extranet Web Server	NPOESS/C3S E-Web Server	Authorized Users	3.3.1
			Authorized Users	NPOESS/C3S E-Web Server	
2	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	NPOESS/IDPS/ E-MSDS	External Users	3.3.2
3	X_NP_NU-L00050	Work Request System Extranet Web	NPOESS/C3S/ WRS	Authorized Users	3.3.3
			Authorized Users	NPOESS/C3S / WRS	
4	X_AN_NP-L00020	ODAD Retrieval	External Web Sites	NPOESS/ IDPS/E-MSDS	3.3.4
5	X_NU_NP-L00020	C3S Orbital Support Data Retrieval	External Web Sites	NPOESS/C3S	3.3.5
6	X_NP_NU-L00130	Consolidated Data Delivery Report	NPOESS/IDPS/ DDS	Authorized Users	3.3.6
7	X_NP_AD-L00030	Requests for Stored Operational Data	Internal Users	CLASS	3.3.7
			CLASS	Internal Users	
8	X_AD_NP-L00040	Stored Operational Data from CLASS	CLASS	Internal Users	3.3.8
9	X_NP_NU-L00070	IDPS Data Quality Monitoring Ad Hoc Data	NPOESS/IDPS/ DQM	Authorized Users	3.3.9
			Authorized User	NPOESS/IDP S/ DQM	
10	X_NP_NU-L00080	IDPS Data Quality Monitoring Reports	NPOESS/IDPS/ DQM	Authorized Users	3.3.10
11	X_NP_NU-L00090	IDPS Data Quality Monitoring Messages	NPOESS/IDPS/ DQM	Authorized Users	3.3.11
12	X_AN_NP-L00010	Quality Assurance Truth Data	External	NPOESS/ IDPS/DQM	3.3.12

Table 3.1.1-2 Common Service Listing lists the services defined in this ICD and is provided here as a quick reference.

Table 3.1.1-2, Common Service Listing

Service Mnemonic	Service Name	Source	Destination	Document Location
X_NP_NU-S00090	Storage Area Network File System Management Service	IDPS	Central	3.4.1

3.1.1.1 Interface Integration Flow

Appendix B represents the traceability of the logical interfaces to the physical interfaces and the data mnemonic(s). This integration flow shows it is possible to have one logical interface to multiple physical interfaces and it is possible to have more than one data mnemonic associated or linked to a logical interface.

3.1.2 Network Interfaces

The Local Area Network (LAN) at each ground site consists of network switches that provide Ethernet connections to NPOESS workstations, servers and other components. The NPOESS Site Communications ICD, D35849 defines the ground network interfaces. The NPOESS Field Terminal Segment ICD, D34651, defines FTS interfaces.

3.1.3 Reserved

3.1.4 Security

Details of the security policies are defined in the Program Information Assurance Policy, D34487. Any specific security needs are identified in the security section of each interface definition.

3.2 Interface Conventions

3.2.1 Interface and Service Mnemonic Definition

Interfaces are named and numbered in accordance with the NPOESS Interface Mnemonic Definition. Figure 3.2.1-1, NPOESS Interface and Service Mnemonic Definition, describes the structure for the interface mnemonic naming convention. All physical and logical interfaces are defined and constructed in accordance with Table 3.2.1-1, NPOESS Interface and Service Mnemonic Definition.

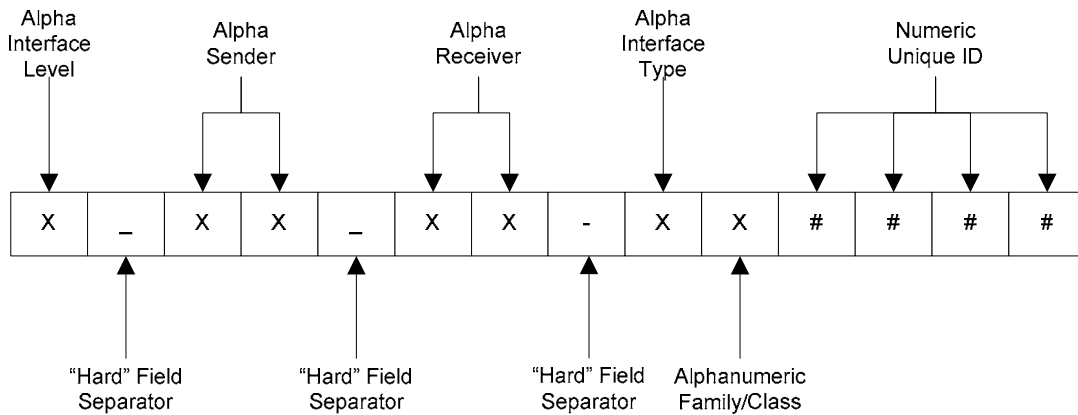


Figure 3.2.1-1, NPOESS Interface and Service Mnemonic Definition

Table 3.2.1-1, NPOESS Interface and Service Mnemonic Description

Field Position	Value	Range	Comments
1	Alpha	R = Intra-Segment T = Inter-Segment X = External	Defines the level of the interface. If an interface is both internal and external, the external indicator takes precedence.
2	_	"_" (Underscore)	Separator between interface level and Sender
3-4	Alpha	Table 3.2.1-2, Interface Sender and Receiver Designator	Two letter symbol denoting the Sender in the interface. See Table 3.2.1-2, Interface Sender and Receiver Designator, for a complete list of two-letter designators.
5	_	"_" (Underscore)	Separator between Sender and Receiver
6-7	Alpha	Table 3.2.1-2, Interface Sender and Receiver Designator	Two letter symbol denoting the Receiver in the interface. See Table 3.2.1-2, Interface Sender and Receiver Designator, for list of two-letter designators.
8	-	"-" (Hyphen)	This is a hard field separator.
9	Alpha	P = Physical Interface L = Logical Interface S = Service	Defines the type of interface or service
10	Alpha-Numeric	A – Z, 0 – 9	Optionally used to add further definition to the mnemonic. See Table 3.2.1-3, Family/Class Identifiers, for list of optional mnemonic identifiers. If this convention is not used, the sequential numbering described directly below (definition for fields 11-14) is used for this field.
11-14	Numeric	0 – 9999	Sequential number of the interface starting at zero (to include family/class interfaces) and increment sufficiently (e.g., 10) allowing insertion of additional interfaces as appropriate. These field positions are augmented by field position 10, if it is not being used for detailed mnemonic definitions.

Table 3.2.1-2, Interface Sender and Receiver Designator provides the two-letter designator for the sender/receiver of the respective interfaces. The sender/receiver is a location/site, segment, or hardware/equipment classification.

Table 3.2.1-2, Interface Sender and Receiver Designator

G/R Identifier	Identifier Description
AD	Comprehensive Large Array-data Stewardship System (CLASS)
AF	Air Force Weather Agency (AFWA)
AN	Ancillary Data
AM	Alternate Mission Management Center (AMMC)
AT	Advanced Technology Microwave Sounder (ATMS)
AU	Ground Integrated Support Facility
BA	Ball Aerospace Technology Corporation (BATC)
C3	Command, Control and Communications Segment (C3S)
CN	Centrals
CR	Cross-track Infrared Sounder (CrIS)
CV	NPOESS Science Investigator Processing System (NSIPS)
DC	Advanced Data Collection System (A-DCS)
DP	Interface Data Processing Segment (IDPS)
FC	Suitland Federal Complex
FD	Field Terminals Data Processor Element
FM	Field Terminals Mission Application Element
FN	Fleet Numerical Meteorology and Oceanography Center (FNMOC)
FO	Field Terminal Operator
FS	Field Terminals Signal Processing Element
FT	Field Terminal Segment (FTS)
IN	Indianapolis Support Node
LA	Long Term Monitoring (LTM) Support Node
LS	NPOESS Launch Support Segment (LSS)
MM	Mission Management Center (MMC)
MS	Mission Support Data
NE	National Environmental Satellite, Data, and Information Service (NESDIS)
NP	National Polar-orbiting Operational Environmental Satellite System (NPOESS)
NU	NPOESS Authorized User
NV	Naval Oceanographic Office (NAVO)
OM	Ozone Mapping and Profiler Suite (OMPS)
PI	NPOESS Preparatory Project (NPP) Instruments
PS	NPOESS Preparatory Project (NPP) Space Segment
RS	Receptor Site

G/R Identifier	Identifier Description
SA	Search and Rescue Satellite Aided Tracking (SARSAT)
SD	Science Data Segment (SDS)
SP	Space Integrated Support Facility
SS	NPOESS Space Segment
SV	Svalbard
VI	Visible/infrared Imager/Radiometer Suite (VIIRS)
WS	White Sands

Table 3.2.1-3, Family/Class Identifiers provides a listing of the single letter designators used to define a family or class associated with the interface as it pertains to a specific site/location or type of equipment/hardware.

Table 3.2.1-3, Family/Class Identifiers

Identifier	Identifier Description
A	AFWA
B	Both LRD and HRD Field Terminals
C	DoD Common
H	HRD Field Terminal
L	LRD Field Terminal
M	MSDS
N	NOAA
S	Flight Vehicle Simulator
W	Web Server

3.2.2 Data Mnemonic Definition

Data flowing across a logical interface is distinguished in most cases, as individual data items by assigning unique data mnemonics. By assigning a unique data mnemonic to each data item, this allows the aggregate data to be “mapped” to the logical interface(s). The two formats for the construction of data mnemonics are defined in NPOESS Common Data Format Control Book – External Volume I - Overview, D34862-01, Data Mnemonic Definition for Data Formats and Data Mnemonic Definition for NPP/NPOESS

Data Products.

3.3 Logical Interface Definitions

3.3.1 C3S Extranet Web Server to Authorized Users

Interface Name	C3S Extranet Web Server to Authorized Users
Mnemonic	X_NP_NU-LW0010
Description	<p>This is a bi-directional interface between the NPOESS C3S Extranet Web Server and Authorized Users</p> <p>C3S posts mission auxiliary data, messages, and reports on the Extranet Web Server for Authorized Users to view and retrieve.</p> <p>C3S also provides a form that allows Authorized Users to generate and submit Stored Telemetry Analysis (STA) Report Requests to NPOESS for plots and tabular data listing reports. Report requests are made through a web form accessible from the Extranet Web Server. The plots available through this form are the STA Last Reported Value (LRV) vs. Time. Plots can either be formatted with a graph for each LRV or a single graph containing all LRVs. A maximum of 8 LRVs can be requested per report. Other plot types are requested via the WRS (X_NP_NU-L00050) by providing all the necessary information required to produce the plot.</p> <p>The C3S Extranet Web Server File Management software maintains the data posted on the C3S Extranet Web Server.</p>

3.3.1.1 OPSCON Scenarios

System	<p>SYS-020-059 – NPOESS Special P/L Mission Operation: A-DCS</p> <p>SYS-020-060 – NPOESS Special P/L Mission Operation: SARSAT</p> <p>SYS-020-070 – NPOESS Selective Data Encryption (SDE) Operations</p> <p>SYS-030-010 – Enterprise Management Operations</p> <p>SYS-030-040 – System Status and Reporting User Interface Operations</p> <p>SYS-030-080 – Cal/Val Archive Infrastructure Operations</p>
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3.3.1.2 Data Transaction and Response

Sender	<p>Mission Management Center (MMC) Internet Demilitarized Zone (IDMZ) External EM Web Server</p> <p>Authorized Users</p>
Receiver	<p>MMC IDMZ External EM Web Server</p> <p>Authorized Users</p>

Response None

3.3.1.3 **Data Content, Data Format and Data Mnemonic**

Data Content and Data Format The data transferred via this interface is listed in Table 3.3.1-1, C3S Extranet Web Data. The data content and format descriptions are defined in the NPOESS CDFCB-X Volume VI, D34862-06.

Data Mnemonic The data mnemonics are specified in Table 3.3.1-1, C3S Extranet Web Data.

3.3.1.4 **Protocol and Parameters**

Protocol HTTPS: External user initiates access to Web site

Parameters HTTPS: Valid Web address - <https://mmc.npoess.noaa.gov>

3.3.1.5 **Data Volume and Data Rate**

Data Volume Data volume varies based on the data requested. Individual file sizes are approximated in the NPOESS CDFCB-X Volume VI, D34862-06.

Data Rate Not applicable to this interface

3.3.1.6 **Interface Characteristics**

Frequency Frequency of data transfer is as required by users. The nominal update frequency for each data type is specified in Table 3.3.1-1, C3S Extranet Web Data.

Timeouts None

Thresholds None

3.3.1.7 **Security**

Client Authentication Required User ID and password are required for accessing the NPOESS C3S Extranet Web Server. Read/write permissions for this interface are defined by user role. Contact the NPOESS Site Manager or Mission Operations Manager for user account setup.

Encryption Required The user authentication and session are encrypted via the HTTPS protocol.

3.3.1.8 **Priority and Constraints**

Priority There is no prioritization of data or users for this interface, except as affected by transfer protocol.

Constraints

Authorized Users have read-only privileges to access posted data on the C3S Extranet Web Server.

Authorized Users have read/write privileges to submit STA Report Requests via the STA Report Request Form.

The Extranet Web Server is not operational while the AMMC is in control.

3.3.1.9 Effectivity

Interface Effectivity

States 1, 2 and 3

Table 3.3.1-1, C3S Extranet Web Data

Data Name	Data Mnemonic	Nominal Update Frequency
End of Contact Report	C3_NU-LW0010-001	See NPOESS CDFCB-X Volume VI, D34862-06
KSAT Ground Contact Schedule	C3_NU-LW2160-000	See NPOESS CDFCB-X Volume VI, D34862-06
HRD/LRD Monitoring Report	C3_NU-LW2080-000	See NPOESS CDFCB-X Volume VI, D34862-06
Mission Notices	C3_NU-LW2060-000	See NPOESS CDFCB-X Volume VI, D34862-06
Mission Schedule	C3_NU-L00070-070	See NPOESS CDFCB-X Volume VI, D34862-06
Network Service Operational Statistics	C3_NU-LW2070-000	See NPOESS CDFCB-X Volume VI, D34862-06
Segment Latency Report (NPP only)	C3_NU-L00081-081	See NPOESS CDFCB-X Volume VI, D34862-06
STA Ad Hoc Telemetry Report	C3_NU-LW2110-000	See NPOESS CDFCB-X Volume VI, D34862-06
STA Report Request Form	C3_NU-L00060-150	See NPOESS CDFCB-X Volume VI, D34862-06

Data Name	Data Mnemonic	Nominal Update Frequency
STA State Checking Report	C3_NU-LW2125-000	See NPOESS CDFCB-X Volume VI, D34862-06
STA Limit Checking Report	C3_NU-LW2100-000	See NPOESS CDFCB-X Volume VI, D34862-06
STA Plots and/or Tabular Listings (JPEG plots, ASCII tabular data listings)	C3_NU-LW2130-000	See NPOESS CDFCB-X Volume VI, D34862-06
STA Trend Report	C3_NU-LW2120-000	See NPOESS CDFCB-X Volume VI, D34862-06
STA SDS Telemetry Report (NPP Only)	C3_NU-LW2090-000	See NPOESS CDFCB-X Volume VI, D34862-06
System Data Availability Report	C3_NU-L00060-060	See NPOESS CDFCB-X Volume VI, D34862-06
System Latency Report	C3_NU-L00080-080	See NPOESS CDFCB-X Volume VI, D34862-06
Two Line Element Sets	C3_NU-L00100-100	See NPOESS CDFCB-X Volume VI, D34862-06
Prediction of Post Maneuver Two Line Element Sets	C3_NU-L00100-101	See NPOESS CDFCB-X Volume VI, D34862-06
CERES APID Telemetry Files (NPP Only)	C3_NU-LW2170-000	See NPOESS CDFCB-X Volume VI, D34862-06
CERES Solar Ephemeris (NPP Only)	C3_NU-LW2170-001	See NPOESS CDFCB-X Volume VI, D34862-06

3.3.2 IDPS External Mission Support Data Server to External Users

Interface Name	IDPS/External Mission Support Data Server to External Users
Mnemonic	X_NP_NU-LM0020
Description	<p>The purpose of this read-only interface is to make a specified set of NPOESS MSD available for download to external users via an Internet connection. The primary intended users for this interface is the DRO Community.</p> <p>The data available on the IDPS/E-MSDS includes information on current NPOESS state and performance as well as NPOESS processing coefficients and Earth Orientation ODAD.</p> <p>National Centers for Environmental Prediction (NCEP) and Navy Operational Global Atmospheric Prediction System (NOGAPS) ancillary data is available from the Telecommunications Operations Center (TOC), see Table 3.3.4-1, Official Dynamic Ancillary Data for URL.</p> <p>Data available to transfer via this interface is limited to the list of data in Table 3.3.2-1, IDPS/E-MSDS Data.</p> <p>Here we address the NPOESS side of the interface that makes the MSD available on the IDPS/E-MSDS. External users manually or automatically initiate pull to transfer data. The NPOESS to Field Terminal ICD, D34651 addresses the interface describing the data retrieval from the IDPS/E-MSDS to the FTS.</p> <p>A regionally constrained and spatially formatted subset of ODAD is also sent to the Field Terminals via the High Rate Data (HRD) and Low Rate Data (LRD) links (interfaces are defined in the C3S to IDPS ICD, D34642, the C3S to SS ICD, D34650, and the NPOESS Field Terminal ICD, D34651).</p> <p>Note that retrieval of ODAD utilizing the E-MSDS is defined as Interface, X_AN_NP-L00020, Official Dynamic Ancillary Data Retrieval.</p>

3.3.2.1 OPSCON Scenarios

System OPSCON Scenarios	<p>SYS-010-020 – Mission Support Data (MSD)</p> <p>SYS-020-020 – Mission Planning & Scheduling Operations</p> <p>SYS-040-010 – Field Terminals (FT) HRD/LRD Operations</p> <p>SYS-040-040 – FT Mission Support Data Operations</p>
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3.3.2.2 Data Transaction and Response

Sender	MMC IDMZ External MSDS
Receiver	External users (Primary intended users are FTS with Internet connectivity)
Response	None

3.3.2.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	The data transferred via this interface is listed in Table 3.3.2-1, IDPS/E-MSDS Data. The data content and format descriptions are defined in the NPOESS CDFCB-X Volume VI, D34862-06.
Data Mnemonic	The data mnemonics associated with the data are specified in Table 3.3.2-1, IDPS/E-MSDS Data.

3.3.2.4 Protocol and Parameters

Protocol	Anonymous FTP: external user initiates pull HTTPS: External user initiates access to Web site
Parameters	FTP: Valid IP address and directories ftp://msds.npoess.noaa.gov. HTTPS: Valid Web address - https://msds.npoess.noaa.gov. The external users retrieve the data from a configurable directory (configured in controlled software release) location specified for each data type. The filenames and locations for each data item currently posted are listed in the IDPS/E-MSDS Data List file and are maintained by the IDPS/MSDS File Management software. Users can download the current versions of the IDPS/E-MSDS Data List and identify the files that they need to download.

3.3.2.5 Data Volume and Data Rate

Data Volume	Data volume varies based on the data requested. Individual file sizes are approximated in NPOESS CDFCB-X Volume VI, D34862-06, see Table 3.3.2-1, IDPS/E-MSDS Data for specific data section reference.
Data Rate	Not applicable to this interface

3.3.2.6 Interface Characteristics

Frequency	The frequency of data transfer is as required by users. The nominal update frequency for each report and data type is specified in Table 3.3.2-1, IDPS/E-MSDS Data.
Timeouts	As implemented by transfer protocol

Thresholds User initiates data transfer on an as needed basis.

3.3.2.7 Security

Client Authentication Required No client authentication required for read-only access to this interface.

Encryption Required The session is encrypted via the HTTPS protocol. There is no encryption for the FTP protocol.

3.3.2.8 Priority and Constraints

Priority There is no prioritization of data or users for this interface, except as affected by transfer protocol.

Constraints Users have read-only privileges to access posted data.
The E-MSDS is not operational while the AMMC is in control.

3.3.2.9 Effectivity

Interface Effectivity States 1, 2 and 3

Table 3.3.2-1, IDPS/E-MSDS Data

Data Name	Data Mnemonic	Nominal Update Frequency
IDPS/E-MSDS Data List	DP_NU-LM2040-000	See NPOESS CDFCB-X Volume VI, D34862-06
HRD/LRD Monitoring Report	C3_NU-LW2080-000	See NPOESS CDFCB-X Volume VI, D34862-06
Processing Coefficients Tables (Ephemeral PCs)	DP_NU-LM2020-001	See NPOESS CDFCB-X Volume VI, D34862-06
Mission Notices	C3_NU-LW2060-000	See NPOESS CDFCB-X Volume VI, D34862-06
Mission Schedule	C3_NU-L00070-070	See NPOESS CDFCB-X Volume VI, D34862-06
Two Line Element Sets	C3_NU-L00100-100	See NPOESS CDFCB-X Volume VI, D34862-06
Prediction of Post Maneuver Two Line Element Sets	C3_NU-L00100-101	See NPOESS CDFCB-X Volume VI, D34862-06

Data Name	Data Mnemonic	Nominal Update Frequency
Official Dynamic Ancillary Data	AN_NP-L10000-030 AN_NP-L10000-060 AN_NP-L10000-090 AN_NP-L10000-120 AN_NP-L10000-150 AN_NP-L10000-180 AN_NP-L10000-210 AN_NP-L10000-240 AN_NP-L10015-030 AN_NP-L10015-060 AN_NP-L10015-090 AN_NP-L10015-120 AN_NP-L10015-150 AN_NP-L10015-180 AN_NP-L10015-210 AN_NP-L10015-240 AN_NP-L20000-030 AN_NP-L20000-060 AN_NP-L20000-090 AN_NP-L20000-120 AN_NP-L20000-150 AN_NP-L20000-180 AN_NP-L20000-210 AN_NP-L20000-240 AN_NP-L10330-003	See NPOESS CDFCB-X Volume VI, D34862-06
Satellite Revolution Number (NPOESS Only)	C3_NU-L00030-030	See NPOESS CDFCB-X Volume VI, D34862-06
Spacecraft Configuration Database (NPOESS Only)	C3_NU-L00040-040	See NPOESS CDFCB-X Volume VI, D34862-06
VIIRS Calibration F-Tables (NPOESS Only)	NP_NU-LM0233-031	See NPOESS CDFCB-X Volume VI, D34862-06

3.3.3 Work Request System

Interface Names	Work Request System Extranet Web
Mnemonic	X_NP_NU-L00050
Description	<p>The WRS is an application that allows communication between NPOESS and Authorized Users to create and deliver work requests, mission task requests, and mission notices. C3S provides and maintains the WRS to allow for identification, distribution and resolution of problems with NPP/NPOESS as part of its overall system Enterprise Management (EM) functional responsibilities.</p> <p>A Web browser provides access to the WRS. External users must login to the Extranet Web and then select the WRS link. The WRS is a bi-directional interface between the NPOESS C3S WRS and Authorized Users.</p> <p>The WRS provides customized forms for Authorized Users to generate, edit, and view the status of Work Requests and Mission Task Requests, as well as, view and retrieve Mission Notices. File attachments can be sent and retrieved through the WRS.</p> <p>Once a request has been initiated, the WRS notifies assigned workgroups. In the case of a Mission Task Request, the mission planner updates the task request interface when the activity is added to the Mission Schedule. The initiator can check work request status using an assigned work request identifier.</p> <p>For details describing the WRS functionality see the UG60822-C3S-004 EM WRS Users Manual.</p>

3.3.3.1 OPSCON Scenarios

System	<p>SYS-020-020 – Mission Planning & Scheduling Operations</p> <p>SYS-020-059 – NPOESS Special P/L Mission Operation: A-DCS</p> <p>SYS-020-060 – NPOESS Special P/L Mission Operation: SARSAT</p> <p>SYS-030-010 – Enterprise Management Operations</p> <p>SYS-030-040 – System Status and Reporting User Interface Operations</p> <p>SYS-030-080 – Cal/Val Archive Infrastructure Operations</p> <p>SYS-050-060 – Integrated Support Facility (ISF)</p>
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3.3.3.2 Data Transaction and Response

Sender	Authorized User
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	MMC IDMZ External EM Web Server
Receiver	Authorized User MMC IDMZ External EM Web Server
Response	The WRS updates the display information in response to the users' requests and modifications. The WRS contains functionality to respond to user requests.

3.3.3.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	<p>The Mission Task Request Form offers the capability for Authorized Users to make pre-defined requests to the mission planner, requesting certain tasks be placed on the mission schedule. Mission tasks must be reviewed and approved by the Operations Director and the Mission Operations Manager (IPO) prior to being acted upon by the Mission Planner. If the requested tasks affect other aspects of mission performance, the review is elevated to the O&S Integrated Product Team Lead and the Associate Director for Operations (IPO).</p> <p>The Work Request Form offers the capability for Authorized Users to submit tickets to report and track problems and to request information (standing reports, status, tasks to schedule, etc.) Authorized Users may optionally choose which position is to receive Work Requests (e.g., the IS group for a broken printer vs. the analyst for a new report request). The Work Request function supports tracking of Work Requests as they are worked via email notifications.</p> <p>Mission Notices are key mission message(s) that are broadcast to Authorized Users that have previously requested notifications of specific program information. Mission Notices are broadcast to users logged into the WRS and to Authorized Users via automatic email distribution.</p>
Data Mnemonic	<p>C3_NU-LW2060-000 – Mission Notices</p> <p>C3_NU-LW2060-001 – Mission Notice Email Messages</p>

3.3.3.4 Protocol and Parameters

Protocol	<p>Simple Mail Transfer Protocol (SMTP): C3S sends email</p> <p>HTTPS: Authorized User initiates access to Web site</p>
Parameters	<p>SMTP: Valid email address</p> <p>To send email, this interface uses the SMTP service T_NP_NU-S00010, Email Policies/Rules Service defined of the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.</p>

HTTPS: Valid Web address – <https://mmc.npoess.noaa.gov>

3.3.3.5 Data Volume and Data Rate

Data Volume	Approximate file sizes are defined in the NPOESS CDFCB-X Volume VI, D34862-06.
Data Rate	Not applicable to this interface

3.3.3.6 Interface Characteristics

Frequency	As required by user or as often as Mission Notices are generated
Timeouts	None
Thresholds	The software initiates transfer as user saves form or refreshes view; or when Mission Notices is generated.

3.3.3.7 Security

Client Authentication Required	User ID and password are required for access to the C3S Extranet Web Server. A separate user ID and password is required for login to the WRS. Read/write permissions for these interfaces are defined for each user. Contact the NPOESS Site Manager or Mission Operations Manager for user account setup.
Encryption Required	The user authentication and session are encrypted via the HTTPS protocol.

3.3.3.8 Priority and Constraints

Priority	There is no prioritization of data or users for this interface, except as affected by transfer protocol.
Constraints	Authorized Users have read/write privileges to view, generate and submit request forms with or without file attachments, as well as receive Mission Notices based on WRS login. The WRS is not operational while the AMMC is in control.

3.3.3.9 Effectivity

Interface Effectivity	States 1, 2 and 3
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3.3.4 Official Dynamic Ancillary Data Retrieval

Interface Name	Official Dynamic Ancillary Data Retrieval
Number	X_AN_NP-L00020
Description	<p>This is a one-way interface to retrieve specified ODAD from the providing sources into NPOESS. The ODAD is used by IDPS in processing the NPOESS Data Products.</p> <p>The set of Official Ancillary Data is used to produce the NPOESS mission Data Products deliverable to CLASS and optionally to the Centrals. The Official NPOESS products, created using Official Ancillary Data, are subject to the quality and latency requirements defined in the NPOESS System Specification, SY15-0007.</p> <p>Table 3.3.4-1, Official Dynamic Ancillary Data lists the ancillary data items and the necessary information to retrieve this data. Some of the data is retrieved from the data originator and some from a data distributor. As part of a Memorandum of Agreement (MOA # CIS-TBD-9867), the National Weather Service (NWS) TOC serves as a data distributor for the NCEP Global Forecast System (GFS) forecast files, the FNMOC NOGAPS forecast files and the FNMOC NAAPS Total Optical Depth files. NCEP has agreed to subset their GFS forecasts with the parameters specified in the NPOESS CDFCB-X Volume VI, D34862-06 and push the GFS files from NCEP to the NWS TOC at each model update. The NOGAPS forecast files are pushed from FNMOC to the TOC at each model update.</p>

3.3.4.1 OPSCON Scenarios

System	SYS-010-020 – Mission Support Data (MSD)
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3.3.4.2 Data Transaction and Response

Sender	MSD Internet Providers
Receiver	MMC IDMZ External MSDS
Response	None

3.3.4.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	The data transferred via the interface is listed in Table 3.3.4-1, Official Dynamic Ancillary Data. The subset of NCEP GFS and the bundled NOGAPS forecast files contain the data parameters specified in the NPOESS CDFCB-X Volume VI, D34862-06. Each file contains one set of parameters for the specified forecast. The NCEP and NOGAPS files are all provided in Gridded Binary 2 (GRIB2) format. The Earth Orientation files are provided in ASCII text report format. For additional details, the data content and format descriptions are defined in the NPOESS CDFCB-X Volume VI, D34862-06.
Data Mnemonic	The data mnemonics associated with the data transferred via this interface are specified in Table 3.3.4-1, Official Dynamic Ancillary Data.

3.3.4.4 Protocol and Parameters

Protocol	Anonymous FTP: IDPS initiates pull
Parameters	FTP: Valid IP address and directory Software residing on the IDPS/E-MSDS automatically retrieves the ODAD from specified Web sites.

3.3.4.5 Data Volume and Data Rate

Data Volume	Data volume varies. Individual file sizes are approximated in the NPOESS CDFCB-X Volume VI, D34862-06.
Data Rate	Not applicable to this interface

3.3.4.6 Interface Characteristics

Frequency	The NCEP GFS, NAAPS, and NOGAPS forecast files are updated every six hours (0, 6, 12 and 18 hours (Z)). The forecast files are produced in three hour prediction intervals from the nominal update epoch times (NPP/NPOESS operations retrieve the 3, 6, 9, 12, 15, 18, 21 and 24 hour interval data files). The Earth Orientation files are updated weekly. There is a delay between the synoptic hour (0, 6, 12, or 18Z) and the time required to assimilate the incoming meteorological observations from around the globe in a sufficient quantity to commence a model run, say anywhere from 90-180 minutes. Then, numerical models take an additional 40-90 minutes to run a typical 7-day forecast for the entire globe. Fortunately (or unfortunately in some cases), future model latencies at each of the primary forecast centers may change, depending on the
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priorities and resources they allocate to this effort.

Timeouts

As implemented by transfer protocol

Thresholds

The software automatically initiates data pull at specified times based on when the data is scheduled to be available.

3.3.4.7 Security

**Client
Authentication
Required**

No client authentication required for anonymous FTP.

**Encryption
Required**

The data transferred via this interface is not encrypted.

3.3.4.8 Priority and Constraints

Priority

There is no prioritization of data or users for this interface, except as affected by transfer protocol.

Constraints

None

3.3.4.9 Effectivity

**Interface
Effectivity**

States 1, 2 and 3

Table 3.3.4-1, Official Dynamic Ancillary Data

Data Mnemonic	Ancillary Label	Data Originator	Operational Connectivity Link
AN_NP-L10000-030	NCEP GFS 3 Hour Forecast	NCEP	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.op nl/MT.gfs_CY.HH/RD.YYYYMMDD/PT.grid_ DF.gr2/ File name: fh.0003_tl.press_gr.0p5deg_pt.npoess
AN_NP-L10000-060	NCEP GFS 6 Hour Forecast	NCEP	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.op nl/MT.gfs_CY.HH/RD.YYYYMMDD/PT.grid_ DF.gr2/ File name: fh.0006_tl.press_gr.0p5deg_pt.npoess
AN_NP-L10000-090	NCEP GFS 9 Hour Forecast	NCEP	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.op nl/MT.gfs_CY.HH/RD.YYYYMMDD/PT.grid_ DF.gr2/ File name: fh.0009_tl.press_gr.0p5deg_pt.npoess
AN_NP-L10000-120	NCEP GFS 12 Hour Forecast	NCEP	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.op nl/MT.gfs_CY.HH/RD.YYYYMMDD/PT.grid_ DF.gr2/ File name: fh.0012_tl.press_gr.0p5deg_pt.npoess
AN_NP-L10000-150	NCEP GFS 15 Hour Forecast	NCEP	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.op nl/MT.gfs_CY.HH/RD.YYYYMMDD/PT.grid_ DF.gr2/ File name: fh.0015_tl.press_gr.0p5deg_pt.npoess
AN_NP-L10000-180	NCEP GFS 18 Hour Forecast	NCEP	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.op nl/MT.gfs_CY.HH/RD.YYYYMMDD/PT.grid_ DF.gr2/ File name: fh.0018_tl.press_gr.0p5deg_pt.npoess
AN_NP-L10000-210	NCEP GFS 21 Hour Forecast	NCEP	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.op nl/MT.gfs_CY.HH/RD.YYYYMMDD/PT.grid_ DF.gr2/ File name: fh.0021_tl.press_gr.0p5deg_pt.npoess
AN_NP-L10000-240	NCEP GFS 24 Hour Forecast	NCEP	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.op nl/MT.gfs_CY.HH/RD.YYYYMMDD/PT.grid_ DF.gr2/ File name: fh.0024_tl.press_gr.0p5deg_pt.npoess

Data Mnemonic	Ancillary Label	Data Originator	Operational Connectivity Link
AN_NP-L20000-030	NOGAPS 3 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.nogaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File Name: US058GMET-GR2mdl.0058_0056_00300F0RLYYYYMMDDHH
AN_NP-L20000-060	NOGAPS 6 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.nogaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File Name: US058GMET-GR2mdl.0058_0056_00600F0RLYYYYMMDDHH
AN_NP-L20000-090	NOGAPS 9 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.nogaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File Name: US058GMET-GR2mdl.0058_0056_00900F0RLYYYYMMDDHH
AN_NP-L20000-120	NOGAPS 12 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.nogaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File Name: US058GMET-GR2mdl.0058_0056_01200F0RLYYYYMMDDHH
AN_NP-L20000-150	NOGAPS 15 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.nogaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File Name: US058GMET-GR2mdl.0058_0056_01500F0RLYYYYMMDDHH
AN_NP-L20000-180	NOGAPS 18 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.nogaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File Name: US058GMET-GR2mdl.0058_0056_01800F0RLYYYYMMDDHH
AN_NP-L20000-210	NOGAPS 21 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.nogaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File Name: US058GMET-GR2mdl.0058_0056_02100F0RLYYYYMMDDHH

Data Mnemonic	Ancillary Label	Data Originator	Operational Connectivity Link
AN_NP-L20000-240	NOGAPS 24 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.nogaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File Name: US058GMET-GR2mdl.0058_0056_02400F0RLYYYYMMDDHH
AN_NP-L10015-030	NAAPS 3 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.naaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File name: US058GMET-GR2mdl.0058_0056_00300F0RLYYYYMMDDHH_0001_000000-000000aero_opt_depth
AN_NP-L10015-060	NAAPS 6 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.naaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File name: US058GMET-GR2mdl.0058_0056_00600F0RLYYYYMMDDHH_0001_000000-000000aero_opt_depth
AN_NP-L10015-090	NAAPS 9 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.naaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File name: US058GMET-GR2mdl.0058_0056_00900F0RLYYYYMMDDHH_0001_000000-000000aero_opt_depth
AN_NP-L10015-120	NAAPS 12 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.naaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File name: US058GMET-GR2mdl.0058_0056_01200F0RLYYYYMMDDHH_0001_000000-000000aero_opt_depth
AN_NP-L10015-150	NAAPS 15 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.naaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File name: US058GMET-GR2mdl.0058_0056_01500F0RLYYYYMMDDHH_0001_000000-000000aero_opt_depth
AN_NP-L10015-180	NAAPS 18 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.naaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File name: US058GMET-GR2mdl.0058_0056_01800F0RLYYYYMMDDHH_0001_000000-000000aero_opt_depth

Data Mnemonic	Ancillary Label	Data Originator	Operational Connectivity Link
AN_NP-L10015-210	NAAPS 21 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.naaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File name: US058GMET-GR2mdl.0058_0056_02100F0RLYYYYMMDDHH_0001_000000-000000aero_opt_depth
AN_NP-L10015-240	NAAPS 24 Hour Forecast	FNMO	ftp://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/MT.naaps_CY.HH/RD.yyyymmdd/PT.grid_DF.gr2 File name: US058GMET-GR2mdl.0058_0056_02400F0RLYYYYMMDDHH_0001_000000-000000aero_opt_depth
AN_NP-L10330-003	Earth Orientation-Bulletin A	USNO	ftp://maia.usno.navy.mil/ser7/finals2000A.all

Key for Operational Connectivity Links

HH – Hour of model run (00, 06, 12, 18)

ffff – Forecast hour (0003, 0006, 0009, 0012, ... 0024)

YYYYMMDD – Calendar date of model run (YearMonthDay)

n – Bundle Number, A sequential identifier in case of multiple deliveries

3.3.5 C3S Orbital Support Data Retrieval

Interface Name	C3S Orbital Support Data Retrieval
Mnemonic	X_NU_NP-L00020
Description	This is a one-way interface for C3S to retrieve external weather data, space environment data, and other support data from specified Internet sites (see Table 3.3.5-1, Orbital Support Data) for orbit determination, orbit propagation and orbit event prediction.

3.3.5.1 OPSCON Scenarios

System	SYS-020-020 NPOESS/NPP Mission Planning & Scheduling Operations SYS-020-030 NPOESS Orbit Maintenance
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3.3.5.2 Data Transaction and Response

Sender	Internet providers
Receiver	C3S Workstations
Response	None

3.3.5.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	The data transferred via the interface is listed in Table 3.3.5-1, Orbital Support Data. For additional details, the data content and format descriptions are defined in the NPOESS CDFCB-X Volume VI, D34862-06.
Data Mnemonic	The applicable data mnemonics associated with the data transferred via this interface are specified in Table 3.3.5-1, Orbital Support Data.

3.3.5.4 Protocol and Parameters

Protocol	FTP: C3S initiates pull HTTP: C3S initiates access to Web site
Parameters	FTP: Valid IP address HTTP: Valid Web address See Table 3.3.5-1, Orbital Support Data for valid FTP and HTTP addresses.

3.3.5.5 Data Volume and Data Rate

Data Volume	Data volume varies based on amount of data retrieved. Individual file sizes are approximated in the NPOESS CDFCB-X Volume VI, D34862-06.
Data Rate	Not applicable to this interface

3.3.5.6 Interface Characteristics

Frequency	As needed
Timeouts	As implemented by transfer protocol
Thresholds	C3S initiates data transfer on an as needed basis.

3.3.5.7 Security

Client Authentication Required	For Orbital Support Data sets requiring user name and password, see Table 3.3.5-1, Orbital Support Data.
Encryption Required	The data transferred via this interface is not encrypted.

3.3.5.8 Priority and Constraints

Priority	None
Constraints	None

3.3.5.9 Effectivity

Interface Effectivity	States 1, 2 and 3 for all orbital support data except GPS Almanac, which is effective for States 2 and 3.
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Table 3.3.5-1, Orbital Support Data

Data Mnemonic	Data Label	Operational Connectivity Link	Authentication Required	Protocol
AN_NP-L10330-003	IERS Earth Orientation Data	ftp://maia.usno.navy.mil/ser7/finals2000A.all	No	FTP
AN_NP-L5380-001 AN_NP-L50380-002	TLEs - TDRSS TLE - RFI	http://www.space-track.org	Yes	HTTP
AN_NP-L10330-001	Leap Seconds	http://maia.usno.navy.mil/ser7/leapsec.dat.	No	HTTP
AN_NP-L10100-002	VPF Data	http://geoengine.nima.mil/geospatial/SW_TOOLS/NIMAMUSE/webinter/vmap0_legend.html	No	HTTP
AN_NP-L50390-001	GPS Almanac (NPOESS only)	http://www.navcen.uscg.gov/gps/current/current.alm	No	HTTP
N/A	Space Weather	http://www.swpc.noaa.gov/	No	FTP
N/A	Terrestrial Weather Data	http://www.nws.noaa.gov/	No	HTTP

3.3.6 Consolidated Data Delivery Report

Interface Name	Consolidated Data Delivery Report
Mnemonic	X_NP_NU-L00130
Description	<p>The Consolidated Data Delivery Report (CDDR) provides a collection of Data Delivery Reports (DDRs) sent to a specific destination indicating the destination and the time interval the reports cover. A CDDR indicates all the products delivered to a particular destination over a configurable period of time.</p> <p>CDDRs provide the capability to identify over-subscription issues. The CDDR facilitates the capability for O&S to identify an anomalous situation that stems from the system architecture and not the products themselves. This is critical functionality for O&S to ensure the system performance and compliance with NPOESS latency requirements.</p> <p>CDDRs are requested via the GUI defined in Deliverable Data Query and Requests Interfaces. This report is delivered to the specified recipients. CDDR recipients are either selected from a list provided via the GUI (specified within the IDP configuration at each location) or they are request specific.</p> <p>The CDDR capability is available to Authorized Users with supervisory roles at the Centrals, SDS, CLASS, IDPS, ISF and Cal/Val.</p>

3.3.6.1 OPSCON Scenarios

System	SYS-030-040 System Status and Reporting User Interface Operations
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3.3.6.2 Data Transaction and Response

Sender	NPOESS IDP
Receiver	Authorized User
Response	None

3.3.6.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	The CDDR format is an XML formatted file. The details for this format are defined in the CDFCB-X, Volume VI, D34862-06.
Data Mnemonic	DP_NU-L00015-000

3.3.6.4 Protocol and Parameters

Protocol	<p>FTP (Passive Mode): IDPS initiates push (during State 1 Only). Data transfer ports are coordinated between NPOESS and the Authorized User.</p> <p>S – FTP (SSH2): IDPS initiates (during States 1, 2, and 3)</p> <p>FCP: over Fibre Channel</p>
Parameters	<p>FTP: Valid IP address, username and password</p> <p>S – FTP: Valid IP address, username and password (available during the NPOESS time frame only)</p> <p>FCP: Valid directory</p>

3.3.6.5 Data Volume and Data Rate

Data Volume	Data volume varies based on amount of data requested and sent. The report file size is detailed in NPOESS CDFCB-X Volume VI, D34862-06.
Data Rate	Not applicable

3.3.6.6 Interface Characteristics

Frequency	CDDRs are sent periodically based only on time: 6, 12, 18 and 24 hours. The CDDR default periodicity is 12 hours. This periodicity is configurable. The transfer period of a CDDR begins when the request for CDDRs is made and continues indefinitely or until the request is removed. A CDDR is sent at the specified periodicity regardless of the number of DDRs sent (if no DDRs are sent during reporting period, the CDDR indicates that the number of files is 0)
Timeouts	<p>The FTP utility is configured to timeout if the IDP is unable to establish or re-establish a connection within 30 seconds (configurable value). Should the FTP connection fault, the IDP retries the FTP every 30 seconds (configurable value) until the transfer is established for up to 3 (configurable value) attempts. After these retries are made, a message is sent to the IDP Operator indicating the fault. Similar timeout values are used for S-FTP transfers.</p> <p>The configurable values identified here are set at system installation time. Any change to the above values must be approved by the O&S CM Process.</p>
Thresholds	As the specified time interval (6, 12, 18 or 24 hour) expires

3.3.6.7 Security

Client Authentication Required	Authentication is provided by username and password supplied by user operations. Details of the security policies and procedures are defined in Program Information Assurance Policy, D34487.
Encryption Required	User authentication and session are encrypted via the S-FTP protocol. There is no encryption for the FTP or FPC protocols.

3.3.6.8 Priority and Constraints

Priority	None
Constraints	CDDR requests are only available via the data request GUI. CDDR requests are allowed for supervisory roles only. Each CDDR includes input from up to seven DDR destinations. Up to seven CDDRs may be requested at an IDP. A single CDDR may be delivered to up to eight recipients/locations. CDDRs are only available from the time of the request forward (historical CDDR requests and re-requests are not available). Generation of CDDRs is only based on time.

3.3.6.9 Effectivity

Interface Effectivity	The effectivity for this interface coincides with the respective IDP effectivity to which the data is being delivered (see respective Data Delivery Interface).
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3.3.7 Requests for Stored Operational Data

Interface Name	Requests for Stored Operational Data
Mnemonic	X_NP_AD-L00030
Description	<p>This bi-directional interface is for internal users to request archived operational data from NOAA's CLASS Web site. The data available includes: NPOESS/NPP Official Data Products, ODAD and Auxiliary Data.</p> <p>Through the CLASS Web site menu, users can register, setup a user profile, login, as well as identify and request data. Users must setup a profile on the CLASS Web site in order to request data.</p> <p>Intended users for this interface are IDPS/DQEs and ISF personnel.</p> <p>The CLASS Web site provides the means for users to make either ad hoc or subscription data requests. Users are able to search the archive inventory based on each available type of product. The product menu allows the user to select the desired product and press go, at which point the user is taken to the Search Criteria Page that presents information and search criteria relevant to that product.</p> <p>CLASS allows a certain number of files per ad hoc request (configured per data type). If the amount of data requested is larger than is reasonably transferred given a user's allowable bandwidth, the user can contact CLASS and request a manual process to package and transfer the data in a way that is more suited to the user. The CLASS Web site provides contact information for this option.</p> <p>The CLASS Web site also provides the capability to request data via physical media, with the stipulation that the user supplies credit card information and accepts applicable charges for the media and its shipping expenses.</p> <p>Please refer to the CLASS Web site online help for detailed information regarding using the Web site. The CLASS documentation takes precedence over this document on matters directly pertaining to the CLASS Web site.</p>

3.3.7.1 OPSCON Scenarios

System	SYS-010-020 – Mission Support Data (MSD) SYS-030-080 – Cal/Val Archive Infrastructure Operations SYS-050-060 – Integrated Support Facility (ISF)
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3.3.7.2 Data Transaction and Response

Sender	Central C3S IT Specialist Workstation NESDIS IDPS DQM Area Workstation Central IDPS Operator Workstation Ground ISF CLASS
Receiver	CLASS Ground ISF Central C3S IT Specialist Workstation NESDIS IDPS DQM Area Workstation Central IDPS Operator Workstation
Response	An email notification from CLASS notifying data requestor of task completion and directions on how to retrieve the data.

3.3.7.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	<p>This interface uses an HTML based form to make archive data requests. The data content needed to populate the fields in this form is described within the CLASS Web site's online help.</p> <p>Requests for delivery of aggregated data files are limited to a minimum data volume of one second and a maximum data volume of 101.5 minutes of data in each delivery. Available aggregation sizes are defined by CLASS and differ based on data product file sizes. The file sizes are not only based on data product, but further defined by sensor.</p> <p>The data format of the CLASS Web site is HTML. The data format of the response email is ASCII text. Both formats are defined by CLASS.</p>
Data Mnemonic	Not applicable to this interface

3.3.7.4 Protocol and Parameters

Protocol	<p>HTTP: Internal user initiates access to the CLASS Web site</p> <p>SMTP: CLASS sends email</p> <p>SMTP: Internal user receives email from CLASS (No attachments allowed)</p>
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Parameters

HTTP: Valid Web address -
http://www.class.noaa.gov/nsaa/products/welcome

SMTP: Valid email address

For internal users to receive email, this interface uses the SMTP service T_NP_NU-S00010, Email Policies/Rules Service defined of the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.

3.3.7.5 Data Volume and Data Rate

Data Volume Not applicable to this interface

Data Rate Not applicable to this interface

3.3.7.6 Interface Characteristics

Frequency The frequency of data transfer is as required by users.

Timeouts As implemented by transfer protocol

Thresholds User initiates data request on an as needed basis.

3.3.7.7 Security

Client Authentication Required To make a data request from the above Web site, CLASS requires a user profile with user ID and password.

Encryption Required The data transferred via this interface is not encrypted.

3.3.7.8 Priority and Constraints

Priority There is no direct prioritization for this interface.

Constraints The requestor must be a registered user of CLASS to request and access data.

CLASS Web site restricts the number of files per request which is configured on a per data type basis. If the number of files requested exceeds the number allowed for that data type, a pop-up message occurs when sending the request to the shopping cart, alerting the requestor.

3.3.7.9 Effectivity

Interface Effectivity States 1, 2 and 3

3.3.8 Stored Operational Data from CLASS

Interface Name	Stored Operational Data from CLASS
Mnemonic	X_AD_NP-L00040
Description	<p>This one way interface defines the transfer of archived operational data from CLASS to the internal user. The data made available includes: NPOESS/NPP Official Data Products, ODAD and Auxiliary Data.</p> <p>First an internal user makes a request to CLASS for the operational data (see 3.3.7 Requests for Stored Operational Data). CLASS posts the data to a location available for retrieval when the requested data is ready. CLASS sends an email notification to the internal user indicating that the data is ready and provides directions on how to retrieve the data (subscription requests have option to disable email notification response feature). After receipt of the CLASS email, the internal user retrieves the data via this interface.</p> <p>Intended users for this interface are IDPS/DQEs and ISF personnel.</p>

3.3.8.1 OPSCON Scenarios

System	<p>SYS-010-020 – Mission Support Data (MSD)</p> <p>SYS-030-080 – Cal/Val Archive Infrastructure Operations</p> <p>SYS-050-060 – Integrated Support Facility (ISF)</p>
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3.3.8.2 Data Transaction and Response

Sender	CLASS
Receiver	<p>Central C3S IT Specialist Workstation</p> <p>NESDIS IDPS DQM Area Workstation</p> <p>Central IDPS Operator Workstation</p> <p>Ground ISF</p>
Response	None

3.3.8.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	<p>If the user requests the exact same data that is delivered from NPOESS, CLASS provides the requested stored operational data exactly the same way as they receive the data from NPOESS. Therefore, this data content and format is defined in the applicable volume of the NPOESS CDFCB-X, D34862. Files requested in formats other than how it is delivered by NPOESS are not defined by NPOESS.</p>
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Data Mnemonic Not applicable for this interface

3.3.8.4 Protocol and Parameters

Protocol Anonymous FTP: Internal user initiates pull for the data from the specified location

Parameters FTP: Valid IP address, directory and path

3.3.8.5 Data Volume and Data Rate

Data Volume Data volume varies based on data requested. For the files that are returned in the same format as they were delivered to CLASS, the individual file sizes are approximated in the applicable volume of the NPOESS CDFCB-X, D34862. File sizes for formats other than those delivered by NPOESS are not defined by NPOESS.

Data Rate Not applicable to this interface

3.3.8.6 Interface Characteristics

Frequency The frequency of data transfer is as required by users.

Timeouts As implemented by transfer protocol

Thresholds User initiates the data transfer after receiving email notification that the requested data is available

3.3.8.7 Security

Client Authentication Required No client authentication required

Encryption Required The data transferred via this interface is not encrypted.

3.3.8.8 Priority and Constraints

Priority There is no prioritization of data or users for this interface except as affected by transfer protocol.

Constraints Initiator must have appropriate permission to write to destination directory.
CLASS makes the requested data available on their FTP Server for only five days (CLASS configurable – this is current setting) from the time that a particular file is placed on the server. If the delivery area gets full, files that have been downloaded are candidates for early deletion.

3.3.8.9 Effectivity

Interface States 1, 2 and 3
Effectivity

3.3.9 IDPS Data Quality Monitoring Ad Hoc Data

Interface Name	IDPS Data Quality Monitoring Ad Hoc Data
Mnemonic	X_NP_NU-L00070
Description	<p>This interface allows transfer of files of unspecified content and format between the IDPS/DQM and Internal and External Authorized Users. This is a bi-directional interface where IDPS/DQM can send data to Internal and External Authorized Users and Internal Authorized Users can provide data to IDPS/DQM.</p> <p>To receive DQM ad hoc data, Authorized Users submit a request via the WRS to be added to the IDPS/DQM distribution list and specifies the types of DQM ad hoc data they want to receive.</p> <p>This interface supports the transfer of science data, calibration information, support data, sensor configuration information, NPOESS configuration information, anomaly investigation data and external data to be used in evaluation of NPOESS products.</p> <p>In support of data denial, the IDPS automatically checks the recipient against its internal authorization list before distributing each DQM product. The DQE updates a list of authorized destinations for use during normal operation and a list for use during data denial, based on O&S determination of authorization.</p>

3.3.9.1 OPSCON Scenarios

System	<p>SYS-020-069 – NPP Data Denial</p> <p>SYS-020-070 – NPOESS Selective Data Encryption (SDE) Operations</p> <p>SYS 030-030 – Cal/Val Long-Term Monitoring (LTM) Operations</p> <p>SYS-030-080 – Cal/Val Archive Infrastructure Operations</p> <p>SYS-050-060 – Integrated Support Facility (ISF)</p>
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3.3.9.2 Data Transaction and Response

Sender	<p>NESDIS IDPS DQM Area Workstation</p> <p>Ground ISF</p> <p>Space ISF</p> <p>LTM GSN</p> <p>Indianapolis GSN</p>
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Receiver Authorized Users
 NESDIS IDPS DQM Area Workstation
 Ground ISF
 Space ISF
 LTM GSN
 Indianapolis GSN

Response None

3.3.9.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format This is a file based transfer that can transmit data files of any content and format.

Data Mnemonic Not applicable to this interface

3.3.9.4 Protocol and Parameters

Protocol SMTP: IDPS/DQM sends email with attachments
 SMTP: IDPS/DQM receives internal email with attachments
 SMTP: Internal user sends and receives email with attachments
 FTP (Passive Mode): IDPS/DQM initiates push/pull (during State 1 only)
 S-FTP (SSH2): IDPS/DQM initiates push/pull (during States 1, 2, and 3)

Parameters SMTP: Valid email address
 FTP: Valid IP address, directory, user name and password
 S-FTP: Valid IP address, directory, user name and password
 The transfer completion mechanism provides a filename change from .tmp to <original extension> when the file transfer is complete.
 To send and receive email, this interface uses the SMTP service T_NP_NU-S00010, Email Policies/Rules Service defined of the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.
 During the NPOESS era, ftp transfers use the T_NP_NU-S00050, Internet Proxy Service for Internet access defined in the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.

3.3.9.5 Data Volume and Data Rate

Data Volume Not applicable to this interface

Data Rate Not applicable to this interface

3.3.9.6 Interface Characteristics

Frequency	The frequency of data transfer is as required by IDPS/DQM or when requested by an Authorized User.
Timeouts	<p>The FTP utility is configured to timeout if the IDP is unable to establish or re-establish a connection within 30 seconds (configurable value). Should the FTP connection fault, the IDP retries the FTP every 30 seconds (configurable value) until the transfer is established for up to 3 (configurable value) attempts. After these retries are made, a message is sent to the IDP Operator indicating the fault. Similar timeout values are used for S-FTP transfers.</p> <p>The configurable values identified here are set at system installation time. Any change to the above values must be approved by the O&S CM Process.</p>
Thresholds	IDPS/DQE initiates data transfer on an as needed basis.

3.3.9.7 Security

Client Authentication Required	User name and password are required to FTP/S-FTP push data to the receiver's location or pull from provider's location.
Encryption Required	The user authentication and session are encrypted via the S-FTP protocol. There is no encryption for the FTP protocol.

3.3.9.8 Priority and Constraints

Priority	There is no prioritization of data or users for this interface, except as affected by transfer protocol.
Constraints	<p>Maximum file size 10 MB</p> <p>In data denial mode, distribution of DQM Ad Hoc Data to unauthorized users is stopped as a result of the DQE or the IDP Operator putting the DQM into the restricted distribution mode. DQE maintains an internal list of which distribution users/destinations are authorized for data denial mode deliveries. O&S is responsible for determining which users/destinations are authorized and which are not, and provides this information to the DQE, as needed, for update of the DQM distribution configuration.</p>

3.3.9.9 Effectivity

Interface Effectivity	States 1, 2 and 3
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3.3.10 IDPS Data Quality Monitoring Reports

Interface Name	IDPS Data Quality Monitoring Reports
Mnemonic	X_NP_NU-L00080
Description	<p>This is a one-way interface that transfers NPOESS IDPS/DQM Reports to Internal and External Authorized Users.</p> <p>IDPS/DQM provides the capability to schedule and execute procedures, perform evaluation and trend assessment of parameters included in the NPOESS Data Products and run user defined scripts. These actions are initiated at a specified time, periodically, upon receipt of relevant datasets or on an ad hoc basis. The IDPS/DQE produces one of the following types of reports with the results of their analysis: a Repository Report, a Statistical Report, a Trend Report or an Ad Hoc Report.</p> <p>IDPS/DQM sends Authorized Users reports automatically upon generation of the reports. Recipients are defined for each procedure in the IDPS/DQM configuration, as updated by the IDPS/DQE. Authorized Users submit requests, via the WRS, to be added to the IDPS/DQM Report distribution list and specifies the types of DQM Reports they want to receive.</p> <p>In support of data denial, the IDPS automatically checks the recipient against its internal authorization list before distributing each DQM product. The DQE updates a list of authorized destinations for use during normal operation and a list for use during data denial, based on O&S determination of authorization.</p>

3.3.10.1 OPSCON Scenarios

System	<p>SYS-020-069 – NPP Data Denial</p> <p>SYS-020-070 – NPOESS Selective Data Encryption (SDE) Operations</p> <p>SYS-030-030 – Cal/Val Long-Term Monitoring (LTM) Operations</p> <p>SYS-030-080 – Cal/Val Archive Infrastructure Operations</p> <p>SYS-050-060 – Integrated Support Facility (ISF)</p>
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3.3.10.2 Data Transaction and Response

Sender	NESDIS IDPS DQM Area Workstation
Receiver	<p>Authorized Users</p> <p>Ground ISF</p> <p>Space ISF</p> <p>LTM GSN</p> <p>Indianapolis GSN</p>

Response None

3.3.10.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format DQM Reports are HTML or XML (Ad Hoc Reports). Optionally, the report may include data files of text, graphical plots and tabular data. If emailed, all files are sent as attachments. The report content and format description is defined in the NPOESS CDFCB-X Volume VI, D34862-06.

Data Mnemonic DP_NU-L00080-002 - Data Quality Monitoring Repository Reports
DP_NU-L00080-003 - Data Quality Monitoring Statistical Reports
DP_NU-L00080-004 - Data Quality Monitoring Trending Reports
DP_NU-L00080-005 Data Quality Monitoring Ad Hoc Reports

3.3.10.4 Protocol and Parameters

Protocol SMTP: IDPS/DQM sends email with attachments
FTP (Passive Mode): IDPS/DQM initiates push (during State 1 only)
S-FTP (SSH2): IDPS/DQM initiates push (during States 1, 2, and 3)

Parameters SMTP: Valid email address
FTP: Valid IP address, directory, user name and password
S-FTP: Valid IP address, directory, user name and password

The transfer completion mechanism provides a filename change from .tmp to <original extension> when the file transfer is complete.

To send email, this interface uses the SMTP service T_NP_NU-S00010, Email Policies/Rules Service defined of the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.

During the NPOESS era, this interface uses the T_NP_NU-S00050, Internet Proxy Service for Internet access defined in the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.

3.3.10.5 Data Volume and Data Rate

Data Volume Approximate file sizes are defined in the NPOESS CDFCB-X Volume VI, D34862-06.

Data Rate Not applicable to this interface

3.3.10.6 Interface Characteristics

Frequency	As required
Timeouts	<p>The FTP utility is configured to timeout if the IDP is unable to establish or re-establish a connection within 30 seconds (configurable value). Should the FTP connection fault, the IDP retries the FTP every 30 seconds (configurable value) until the transfer is established for up to 3 (configurable value) attempts. After these retries are made, a message is sent to the IDP Operator indicating the fault. Similar timeout values are used for S-FTP transfers.</p> <p>The configurable values identified here are set at system installation time. Any change to the above values must be approved by the O&S CM Process.</p>
Thresholds	Data transfers occur either manually or automatically. The IDPS/DQE initiates manual data transfers on an as needed basis. Automatic data transfers are initiated by the IDPS/DQM software upon production of the deliverable report, as defined in the DQM configuration for automatic procedure execution.

3.3.10.7 Security

Client Authentication Required	User name and password are required to FTP/FTP-S push data to the receiver's location.
Encryption Required	The user authentication and session are encrypted via the S-FTP protocol. There is no encryption for the FTP protocol.

3.3.10.8 Priority and Constraints

Priority	There is no prioritization of data or users for this interface except as affected by transfer protocol.
Constraints	<p>Maximum file size 10 MB</p> <p>In data denial mode, distribution of DQM messages to unauthorized users is automatically stopped as a result of the DQE or IDP Operator putting the DQM into the restricted distribution mode. DQE maintains an internal list of which automatic distribution users/destinations are authorized for data denial mode deliveries. O&S is responsible for determining which users/destinations are authorized and which are not, and provide this information to the DQE, as needed, for update of the DQM automatic distribution configuration.</p>

3.3.10.9 Effectivity

Interface	States 1, 2 and 3
Effectivity	

3.3.11 IDPS Data Quality Monitoring Messages

Interface Name	IDPS/Data Quality Monitoring Messages
Mnemonic	X_NP_NU-L00090
Description	<p>This is a one-way interface that transfers NPOESS IDPS/DQM messages to Internal and External Authorized Users.</p> <p>To receive DQM Messages, Authorized Users submits a request via the WRS to be added to the IDPS/DQM distribution list and specifies the types of DQM Messages they want to receive.</p> <p>IDPS/DQM provides email messages relating to Data Quality Notifications (DQN) and IDPS/DQM procedure assessment of selected data against predefined thresholds.</p> <p>IDPS/DQM evaluates the DQNs received from IDPS/Data Delivery Subsystem (DDS) and evaluates the threshold(s) exceeded. IDPS/DQM may then send Authorized Users (authorized by DQE based on Standard Operating Procedures) additional information in the form of an IDPS/DQM Message. IDPS/DQM maintains a list of Authorized Users for each DQN.</p> <p>During IDPS/DQM procedure execution there may be evaluation of data extracted from NPOESS Data Products supplied by IDPS/DDS. In the event the data exceeds predefined thresholds, a message is sent to Authorized Users. Each individual procedure defines its own messages for Authorized Users.</p>

3.3.11.1 OPSCON Scenarios

System	<p>SYS-020-069 – NPP Data Denial</p> <p>SYS-020-070 – NPOESS Selective Data Encryption (SDE) Operations</p> <p>SYS-030-030 – Cal/Val Long-Term Monitoring (LTM) Operations</p> <p>SYS-030-080 – Cal/Val Archive Infrastructure Operations</p> <p>SYS-050-060 – Integrated Support Facility (ISF)</p>
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3.3.11.2 Data Transaction and Response

Sender	NESDIS IDPS DQM Area Workstation
Receiver	<p>Authorized Users</p> <p>Ground ISF</p> <p>Space ISF</p> <p>LTM GSN</p> <p>Indianapolis GSN</p>
Response	None

3.3.11.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	A DQM message includes the metadata from the original NPOESS product causing the DQN or generation of the internal threshold message, and a text message stating threshold value(s) and test results. The DQM Message is ASCII text. The content and format description is defined in the NPOESS CDFCB-X Volume VI, D34862-06.
Data Mnemonic	DP_NU-L00090-001

3.3.11.4 Protocol and Parameters

Protocol	<p>SMTP: IDPS/DQM sends email</p> <p>FTP (Passive Mode): IDPS/DQM initiates push (during State 1 only).</p> <p>S-FTP (SSH2): IDPS/DQM initiates push (during States 1, 2, and 3)</p>
Parameters	<p>SMTP: Valid email address</p> <p>FTP: Valid IP address, directory, user name and password</p> <p>S-FTP: Valid IP address, directory, user name and password (available during the NPOESS timeframe only)</p> <p>The transfer completion mechanism provides a filename change from .tmp to <original extension> when the file transfer is complete.</p> <p>To send email, this interface uses the SMTP service T_NP_NU-S00010, Email Policies/Rules Service defined of the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.</p> <p>During the NPOESS era, this interface uses the T_NP_NU-S00050, Internet Proxy Service for Internet access defined in the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.</p>

3.3.11.5 Data Volume and Data Rate

Data Volume	Approximate file size is defined in the NPOESS CDFCB-X Volume VI, D34862-06.
Data Rate	Not applicable to this interface

3.3.11.6 Interface Characteristics

Frequency	Frequency is dependent on DQM configuration as defined by the DQE.
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Timeouts The FTP utility is configured to timeout if the IDP is unable to establish or re-establish a connection within 30 seconds (configurable value). Should the FTP connection fault, the IDP retries the FTP every 30 seconds (configurable value) until the transfer is established for up to 3 (configurable value) attempts. After these retries are made, a message is sent to the IDP Operator indicating the fault. Similar timeout values are used for S-FTP transfers.

The configurable values identified here are set at system installation time. Any change to the above values must be approved by the O&S CM Process.

Thresholds DQM automatically initiates data transfer upon receipt of DQNs or notifications generated internally by the DQM. The DQE configures the DQN to distribute DQM messages to users for specified notifications and tests that exceed thresholds. DQM messages are defined independently for each defined threshold test type.

3.3.11.7 Security

Client Authentication Required User name and password are required to FTP/S-FTP push data to the receiver's location.

Encryption Required The user authentication and session are encrypted via the S-FTP protocol. There is no encryption for the FTP protocol.

3.3.11.8 Priority and Constraints

Priority There is no prioritization of data or users for this interface, except as affected by transfer protocol.

Constraints Maximum file size 100 KB
In data denial mode, distribution of DQM reports to unauthorized users is automatically stopped as a result of the on DQE or IDP Operator putting the DQM into the restricted distribution mode. DQE maintains an internal list of which automatic distribution users/destinations are authorized for data denial mode deliveries. O&S is responsible for determining which users/destinations are authorized and which are not, and provides this information to the DQE, as needed, for update of the DQM automatic distribution configuration.

3.3.11.9 Effectivity

Interface Effectivity States 1, 2 and 3

3.3.12 Quality Assurance Truth Data

Interface Name	Quality Assurance Truth Data
Mnemonic	X_AN_NP-L00010
Description	<p>The NPOESS IDPS provides a DQM function. The IDPS/DQM is staffed with two Data Quality Engineers (DQEs). One of the IDPS/DQM functions is to perform a "Quick-look" evaluation of the NPOESS Data Products. This is accomplished by using current or archived NPOESS data and various external truth data referred to in this ICD as QA Truth Data.</p> <p>The IDPS/DQE retrieves the QA Truth Data listed in Table 3.3.12-1, QA Truth Data directly onto the DQM workstation.</p>

3.3.12.1 OPSCON Scenarios

System	<p>SYS-010-020 Mission Support Data (MSD)</p> <p>SYS-030-030 Cal/Val Long-Term Monitoring (LTM) Operations</p> <p>SYS-030-080 Cal/Val Archive Infrastructure Operations</p>
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3.3.12.2 Data Transaction and Response

Sender	Truth Data Web Sites
Receiver	NESDIS IDPS DQM Area Workstation
Response	None

3.3.12.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	The data transferred via this interface is listed in Table 3.3.12-1, QA Truth Data. The data description and purpose are defined in the NPOESS CDFCB-X Volume VI, D34862-06, which also provides a link to the controlling web site describing the data content and format.
Data Mnemonic	The data mnemonics associated with the IDPS/DQM Truth Data transferred via this interface are specified in Table 3.3.12-1, QA Truth Data.

3.3.12.4 Protocol and Parameters

Protocol	<p>FTP: IDPS/DQE initiates pull</p> <p>HTTP: IDPS/DQE initiates access to Web site</p>
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Parameters FTP: Valid IP address – see Table 3.3.12-1, QA Truth Data
HTTP: Valid Web address – see Table 3.3.12-1, QA Truth Data
For Internet access during the NPOESS era, this interface uses the proxy service T_NP_NU-S00050, Internet Proxy Service defined in the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.

3.3.12.5 Data Volume and Data Rate

Data Volume Data volume varies based on the data requested. Individual file sizes are approximated in the NPOESS CDFCB-X Volume VI, D34862-06.

Data Rate Not applicable to this interface

3.3.12.6 Interface Characteristics

Frequency The frequency of data transfer is as required by the DQE. The nominal update frequency of the data is specified in the NPOESS CDFCB-X Volume VI, D34862-06.

Timeouts As implemented by transfer protocol

Thresholds Data transfer is initiated by the DQE on an as-needed basis.

3.3.12.7 Security

Client Authentication Required For QA Truth Data sets requiring user name and password, see Table 3.3.12-1, QA Truth Data.

Encryption Required The data transferred via this interface is not encrypted.

3.3.12.8 Priority and Constraints

Priority There is no prioritization of data or users for this interface, except as affected by transfer protocol.

Constraints Initiator must have appropriate permission to write to destination directory.

3.3.12.9 Effectivity

Interface Effectivity States 1, 2 and 3

Table 3.3.12-1, QA Truth Data

Mnemonic	Label	Link	Authentication Required	Protocol
AN_NP-L40110-001	ACARS	See the NPOESS CDFCB-X Volume VI, D34862-06	None	HTTP
AN_NP-L40010-001	AERONET	See the NPOESS CDFCB-X Volume VI, D34862-06	None	HTTP
AN_NP-L40020-001	ASOS	See the NPOESS CDFCB-X Volume VI, D34862-06	None	HTTP/ FTP
AN_NP-L40210-001	BSRN	See the NPOESS CDFCB-X Volume VI, D34862-06	None	FTP
AN_NP-L40000-001	NCEP Analysis Product	See the NPOESS CDFCB-X Volume VI, D34862-06	None	FTP
AN_NP-L40150-001	Ozone Sonde Network	See the NPOESS CDFCB-X Volume VI, D34862-06	None	HTTP
AN_NP-L40170-001	RAOB	See the NPOESS CDFCB-X Volume VI, D34862-06	None	HTTP/ FTP
AN_NP-L40130-001	Ship/Buoy	See the NPOESS CDFCB-X Volume VI, D34862-06	None	HTTP/ FTP
AN_NP-L40020-002	Cloud Mask	See the NPOESS CDFCB-X Volume VI, D34862-06	None	HTTP
AN_NP-L40190-002	MODIS SST	See the NPOESS CDFCB-X Volume VI, D34862-06	None	HTTP
AN_NP-L40350-001	Brightness Temperature	See the NPOESS CDFCB-X Volume VI, D34862-06	None	HTTP

3.4 Common Services

The following services are Industry Standards services or COTS products used on the NPOESS program. Therefore, the control of these services is outside of NPOESS and has predefined responses, formats and parameters. These services are documented here in order to show how NPOESS utilizes them.

3.4.1 Storage Area Network File System Management Service

Service Name	Storage Area Network File System Management Service
Mnemonic	X_NP_NU-S00090
Description	<p>The purpose of this service is to manage the file system on the Central's SAN as well as the file-system metadata to allow IDPS to write data to a Landing Zone within the Central's SAN. The SAN File Management Service uses Advanced Digital Information Corporation (ADIC) StorNext™ FS to provide this service. The StorNext™ FS is designed for heterogeneous IT environments to transparently manage and enable data storage across otherwise incompatible storage platforms. The StorNext™ FS accomplishes its management based on a logical or virtual view of the NPOESS and Central's SAN storage rather than a physical view.</p> <p>This virtualization enables the StorNext™ FS, via fibre connectivity, to directly connect NPOESS and the Central's SAN storage devices, thus permitting simultaneous high-speed file transfers from IDPS to the Central's SAN. The SAN FS also provides functionality to pre-allocate storage on the Central's SAN (for IDPS files) to optimize disk access and perform file metadata handling.</p> <p>Constraints: The SAN FS Manager and Client must be of compatible StorNext™ software versions (specified in the SAN FS Setup and Configuration Document, IG60822-C3S-084). StorNext Custom port ranges require coordination between NPOESS and the Central. Changes or upgrades of any piece of the file system without coordination across the system could disrupt or halt operations.</p>
System OPSCON Scenario	SYS-010-010, Stored Mission Data

3.4.1.1 Data Transactions

Clients	IDPS SAN FS Manager Client Centrals SAN FS Manager Server
Protocol	TCP/IP UDP RPC

3.4.1.2 Documentation

Configuration Specifications	SAN FS Setup and Configuration Document, IG60822-C3S-084
Standards Documents	Not applicable

3.4.1.3 Effectivity

Service Effectivity	States 1, 2 and 3
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3.5 Common IDPS DDS Interface Descriptions

The NPOESS IDPS/DDS interfaces (data request, request status, automated notifications and DDRs) are utilized by multiple users via different interfaces which are documented in multiple ICDs (i.e., this ICD, as well as, NPOESS to NOAA ICD, D31413, NPOESS to DoD ICD, D34466, NPOESS ISF ICD, D37032, NPOESS to NSIPS ICD, D41068, NPP to SDS ICD, D34645). To minimize duplication, this section is provided in order to identify the common components of the above listed interfaces. The unique data points for each interface are provided within the specific interface definition in the applicable ICD.

3.5.1 Deliverable Data Query and Request

Interface Name	Deliverable Data Query and Request
Mnemonics	<p>This interface description applies to the following interfaces:</p> <ul style="list-style-type: none"> X_CN_NP-LN0010 X_CN_NP-LN0012 X_AD_NP-LN0010 X_CN_NP-LC0010 X_CN_NP-LC0012 X_SD_NP-L00010 X_SD_NP-L00015 X_SD_NP-L00012 X_NU_NP-L00010 T_AU_DP-L00030 X_FM_FD-LB5000
Description	<p>NPOESS provides the ability for Authorized Users to place queries and requests for deliverable data from the IDPs.</p> <p>Deliverable data can include (based on user role):</p> <ul style="list-style-type: none"> NPOESS data products Ancillary data Auxiliary data <p>The query and request interface capabilities include:</p> <ul style="list-style-type: none"> Placing requests for deliverable data Modifying existing requests Requesting status of existing requests for deliverable data Placing requests for CDDRs, available via only the Graphical User Interface (GUI) mechanism Querying the system catalog on data currently available for

retrieval

This interface is provided in three equivalent forms:

1. GUI - allows users to interactively select and specify the options necessary to submit requests via a graphical interface
2. Application Programming Interface (API) - allows requests to be placed by end-user software running on a separate workstation. Users must create a software application to use the API in order to create, send, receive and read messages to/from the NPOESS IDP via the API
3. Java Message Service (JMS) API - a messaging standard that allows application components to create, send, receive and read messages to/from the NPOESS IDP.

When commanded, the IDPS JMS API:

- Interfaces with the JMS API to monitor a configured JMS for XML messages that follow a specific format (message protocol)
- Converts XML messages to request API commands
- Monitors request API messages
- Converts request API messages to XML messages and places them, via the JMS API, on the JMS

A requestor may choose to implement the queries and requests using the GUI, the API, the JMS API or a combination of the three.

Data requests are categorized as either standard requests or catalog requests.

Standard requests are given a start date/time and an end date/time and are available to request single or multiple data items:

- The request start date/time is set to the time the request is created unless a start date/time is specified by the requestor
- If the end date/time is not specified, then the request stays active indefinitely (standing request)
- If an end date/time is specified, then the request stays active until that end date/time (ad-hoc request)
- The start date/time can be in the past. If it exceeds the maximum data store time, then it is truncated to the current date/time minus the maximum data store time

Catalog queries and catalog requests are available via the GUI and APIs. Authorized Users query the catalog for available deliverable data by specifying the data parameters. The query returns a list of applicable data and provides a Unique Resource Identifier (URID), also known as an N_Reference_ID, for each data item. The requestor uses a URID (available via the query results or existing data product information) to make a catalog request for a specific

data item. Catalog requests allow one URID per request. The delivery result of a catalog request consists of a single product packaged and formatted according to the CDFCB-X. The packaged data contains the most current geolocation data in the system that has the same temporal and spatial constraints. The intent of the catalog query and request is primarily for the IDPS/DQE; however, the functionality is available to all Authorized Users.

Data products are requested as individual granules of data or aggregated data. Both categories of data are available for delivery with the following packaging option:

When requesting granules of data, each granule matching the request criteria is delivered as either separate HDF5 files or a single (packaged) HDF5 file

When requesting aggregated data, the granules matching the request criteria are aggregated together for the specified time interval and delivered as either separate HDF5 files or a single (packaged) HDF5 file

In addition to the types of data requests described above, requestors have the option to select the following:

Deliverable Data Automated Notification email messages for general data delivery status (for automated notification details, see Deliverable Data Automated Notification descriptions)

Update granules (if requested granules are repaired after the data file is delivered, this option sends the repaired file to the destination specified in request). The individual repaired granule is sent, regardless of whether the original granule delivered was aggregated or packaged with other products.

The data a user is able to request is based on the role the user logs in with.

3.5.1.1 OPSCON Scenarios

System	Interface specific
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3.5.1.2 Data Transaction and Response

Sender	Authorized User
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Receiver	NPOESS IDP
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Response	<p>Catalog Query This interface responds to a Catalog Query with a query result.</p> <p>Data Request The response to this request is described by the Deliverable Data Query and Request Status interface in Section 3.5.2.</p>
3.5.1.3 Data Content, Data Format and Data Mnemonic	
Data Content and Data Format	<p>Catalog Request Requests on the data catalog contain the URID.</p> <p>Catalog Query Query specifications are data product, sensor and spacecraft. Optional query specifications are effectivity and geospatial subsetting.</p> <p>GUI The GUI data content and format is implemented using the Citrix Presentation Server suite which is defined in the IDPS DDS Software User's Manual Part II User's Guide CDRL S142.</p> <p>API and JMS API The API and JMS API are described in the NPOESS Application Programming Interface (API) User's Guide, D41044.</p>
Data Mnemonic	Not applicable

3.5.1.4 Protocol and Parameters

Protocol	Interface specific
Parameters	Interface specific

3.5.1.5 Data Volume and Data Rate

Data Volume	<p>The data volume is 1024 Bytes per transaction, plus 400 Bytes per requested, request modification, catalog query or status request.</p> <p>The data volume also varies based on catalog query parameters.</p>
Data Rate	Not applicable

3.5.1.6 Interface Characteristics

Frequency	User initiates data queries and requests on an as needed basis.
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Timeouts

GUI

If the GUI interface does not return an appropriate response within 60 seconds (O&S managed), the GUI displays a notification that it has timed out and the user should re-issue the command.

API

Communications timeout is set by the user's environment, the default setting is 60 seconds.

The IDP installation default for the keep-alive timeout is set for 30 seconds (O&S managed).

JMS API

Default Time-To-Live (TTL) on the JMS API queue is 60 seconds for each message. JMS API queue persistence for reliable messaging is also configurable by the user. Default setting is non-persistent JMS API queue.

The IDP installation default for the keep-alive timeout is set for 30 seconds (O&S managed).

Thresholds

Upon user request

3.5.1.7 Security

Client Authentication Required

Authentication for this interface is via the infrastructure authentication process.

Details of the security policies and procedures are defined in the Program Information Assurance Policy, D34487.

Encryption Required

GUI and JMS API

No encryption needed

API

Central API requests require an encrypted password upon interface initialization.

3.5.1.8 Priority and Constraints

Priority

Prioritization scheme for data delivery requests is based on the following data request inputs:

Role – the role of the user making the request. Roles are assigned values (configurable) from 1 to 100, where 100 is the highest priority.

Data – the data being requested (i.e., RDRs, SDRs, TDRs, EDRs, ARPs, IPs and TLEs) are assigned values (configurable) from 1 to 10, with 10 being the highest priority.

Data requests of equal priority are handled in the order of next execution start time.

An example of roles and their corresponding values are identified as follows:

	Role	Value
1	Role 1 Operations	100
2	Role 1 Administration	50
3	Role 2 Operations	80
4	Role 2 Administration	20
5	Role 3 Operations	60

An example of data and their corresponding values are identified as follows:

	Data	Value
1	VIIRS-NCC-EDR_NPP	10
2	VIIRS-SST-EDR_NPP	10
3	TLE-AUX_NPP	8

Catalog Requests

The Catalog Requests have low priority and data latency does not apply.

Constraints

Catalog Requests

A one time delivery only of a single data item that is shown to be available in a catalog query

No aggregations are available

Packaging is always on

Geolocation is always included

The Repaired Granules option is not available

Catalog Queries

Catalog queries return up to a configurable maximum number

(O&S managed) of items found.

GUI

The IDPS/DDS imposes a limit of 20 concurrent users per IDP. Procedurally, 6 are allocated to NPOESS operations users and 14 are allocated to External Users (Centrals, CLASS, SDS, ISF, NSIPS and PST).

Up to 20 GUI user logins at a time are supported at a single IDP. This number may be further limited by the number of users who are actively using the GUI in the Algorithm Support Area (ASA)

A user account is created with different roles associated with it, such as 'user' or 'administrator'. A user may log in once under a given user-role combination at a time.

Data available for a request is restricted based on user role.

Geo-spatially based requests are satisfied with an HDF5 file of all data granules covering the specified area.

Placing requests for CDDRs is available via the GUI mechanism only.

API

The number of APIs that can be opened concurrently is configurable at each site depending on the resources available.

JMS API

User must perform validation of the request specifications parameters for conformance to an XML schema. Request specifications are defined in the NPOESS Application Programming Interface (API) User's Guide, D41044. (Geospatial constraints, temporal specs, etc.)

Persistent process required on user's end to keep an active JMS API message publisher.

Data retransmits are requested with the HDF5 file name (provided in the Request Status, the Deliverable Data Automated Notification and the Data Delivery Report).

Retransmit of HDF5 files overwrites existing data files. To avoid sharing problems (e.g., transfer failures), the file must not have an open file handle with any process.

If a data retransmit file is requested to a Windows-type box, the original file needs to be moved to a new location, renamed, or deleted. Windows will try to overwrite the original file, and then it will fail, leaving the new file in a .tmp state. The FTP transfer will fail, and the file will not be successfully retransmitted.

Requests for delivery of aggregated data files are limited to a

data volume equivalent to no more than one orbits worth of data, approximately 101 minutes in each delivery.

3.5.1.9 Effectivity

Interface Effectivity	Interface specific
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3.5.2 Deliverable Data Query and Request Status

Interface Name	Deliverable Data Query and Request Status
Mnemonics	This interface description applies to the following interfaces: X_NP_CN-LN0020 X_NP_CN-LN0022 X_NP_AD-LN0020 X_NP_CN-LC0020 X_NP_CN-LC0022 X_NP_SD-L00020 X_NP_SD-L00022 X_NP_NU-L00100 T_DP_AU-L00035 X_FD_FM-LB5100
Description	<p>The Deliverable Data Query and Request Status is a response with a status message returned for each of the four types of requests made via the Deliverable Data Query and Requests Interface.</p> <p>This request status is sent automatically as a response to a data query and request. The mechanism (GUI, API or JMS API) to which the status message is sent is specified in the individual account setup (username and role).</p>

3.5.2.1 OPSCON Scenarios

System	Interface specific
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3.5.2.2 Data Transaction and Response

Sender	NPOESS IDP
Receiver	Authorized User
Response	None

3.5.2.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	<p>The following data content is transferred across this interface and pertain to all three interface mechanisms; GUI, API and JMS API:</p> <ul style="list-style-type: none">• Response containing catalog query results (a list of the products currently available to the user that corresponds to the query specification and a subset of its metadata)• Response containing status of requests for data delivery (a status of the request including all parameters that define the current request and date of last request)
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modification)

- Response containing status of request for modifications of existing data delivery requests (a status message similar to that for an original data delivery request status message)

The response to a data delivery request contains the following status for all three interface mechanisms:

- Request received
- Processing begun
- Processing complete
- Success/Error/Messages
- Destination and location of the data delivered

Status messages with identical content are optionally returned via Deliverable Data Automated Notification (user must provide an email destination as part of the original request). The Deliverable Data Automated Notification interface is discussed further in interface, Deliverable Data Automated Notification.

GUI

The GUI data content and format is implemented using the Citrix Presentation Server suite which is defined in the DDS Software User's Manual Part II User's Guide CDRL S142. (this document is delivered with the software).

API and JMS API

The API and JMS API are described in the NPOESS Application Programming Interface (API) User's Guide, D41044.

Data Mnemonic Not applicable

3.5.2.4 Protocol and Parameters

Protocol Interface specific

Parameters Interface specific

3.5.2.5 Data Volume and Data Rate

Data Volume Responses to a data delivery status message are 1024 bytes per message plus 400 bytes per product reported.
Responses to catalog queries are expected to return no more than 1024 bytes of information for each data item returned by the query.

Data Rate Not applicable

3.5.2.6 Interface Characteristics

Frequency	As needed to respond to each user request
Timeouts	GUI The GUIs default timeout is 60 seconds (O&S managed) API Communications timeout is set by the user's environment (IDPS default is 60 seconds which is provided in the API via the software release). The IDP installation default for keep-alive timeout is set for 30 seconds JMS API Default Time-To-Live (TTL) on the JMS API queue is 60 seconds for each message. JMS API queue persistence for reliable messaging is also configurable by the user. IDPS default setting, provided via the software release, is non-persistent JMS API queue. The IDP installation default, provided via the software release, for keep-alive timeout is set for 30 seconds.
Thresholds	Status messages are issued when there is a change in state of the request, in response to a request modification or when the user submits a request for a status update via the GUI, API or JMS API.

3.5.2.7 Security

Client Authentication Required	Authentication for this interface is via the infrastructure authentication process Details of the security policies and procedures are defined in the Program Information Assurance Policy, D34487.
Encryption Required	API password encryption required for Centrals

3.5.2.8 Priority and Constraints

Priority	None
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Constraints

GUI

The GUI imposes a limit of 20 concurrent users. Procedurally; 6 are allocated to NPOESS operations users and 14 are allocated to External users.

The NPOESS IDP can respond to a number of requests limited only by the available system resources.

Up to 20 GUI user logins at a time are supported at a single IDP. A user may log in once under a given user-role combination at a time. This number may be further limited by the number of users who are actively using the GUI in the ASA.

API

The number of APIs that can be opened concurrently is configurable at each site depending on the resources available.

JMS API

JMS API users must perform validation of the response parameters for conformance to an XML schema, which is specified in the NPOESS Application Programming Interface (API) User's Guide, D41044. (Geospatial constraints, temporal specs, etc.)

Persistent process required on the user's end to keep an active JMS API listener.

3.5.2.9 Effectivity

Interface Effectivity

Interface specific

3.5.3 Deliverable Data Automated Notification

Interface Name	Deliverable Data Automated Notification
Mnemonics	This interface description applies to the following interfaces: X_NP_CN-LN0080 X_NP_AD-LN0080 X_NP_CN-LC0080 X_NP_SD-L00080 X_NP_NU-L00110 T_DP_AU-L00080 T_DP_CV-L00080 X_FD_FM-LB5400
Description	The Deliverable Data Automated Notification is an option that users may select when making/modifying data requests via the Deliverable Data Query and Request. If this option is selected, the Deliverable Data Automated Notification is sent to an email address specified by the requestor. This notification informs the user that there was an attempt to send the data and whether or not the attempt was successful.

3.5.3.1 OPSCON Scenarios

System	Interface specific
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3.5.3.2 Data Transaction and Response

Sender	NPOESS IDP
Receiver	Authorized User
Response	Not applicable

3.5.3.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	The description of the content and format of these deliverable data automated notification messages are described in CDFCB – X, Volume VI, D34862-06.
Data Mnemonic	DP_NU-L00060-000 – Deliverable Data Automated Notifications

3.5.3.4 Protocol and Parameters

Protocol	SMTP: IDPS sends email
Parameters	Valid email address See the Common Interfaces and Services ICD, D34659-02, Email Policies/Rules.

3.5.3.5 Data Volume and Data Rate

Data Volume	Data volume varies based on amount of data requested and sent. The notification file size is approximated in NPOESS CDFCB-X Volume VI, D34862-06.
Data Rate	Not applicable

3.5.3.6 Interface Characteristics

Frequency	Upon user request
Timeouts	None
Thresholds	Messages are sent if the user requests this service and when the criteria that cause this message to be sent are met.

3.5.3.7 Security

Client Authentication Required	None
Encryption Required	None

3.5.3.8 Priority and Constraints

Priority	None
Constraints	Data Delivery Automated Notifications are only sent if requested. Email content must fall within the email size limitations as specified in T_NP_NU-S00010, Email Policies/Rules Service defined of the NPOESS Common Interfaces and Services ICD Volume 2 - Internal, D34659-02.

3.5.3.9 Effectivity

Interface Effectivity	Interface specific
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3.5.4 Data Delivery Report

Interface Name	Data Delivery Report
Mnemonics	This interface description applies to the following interfaces: X_NP_CN-LN0210 X_NP_AD-LN0210 X_NP_CN-LC0210 X_NP_SD-L00035 X_NP_NU-L00120 T_DP_AU-L00050 T_DP_CV-L00210 X_FD_FM-LB5300
Description	<p>The DDR is a report of all the file transfers, successful and failed, via the respective delivery of Deliverable Data Interface (requested via the Deliverable Data Query and Requests). The report contains information about the distributed data including: filename, directory location and other format information as defined in the NPOESS CDFCB-X, Volume VI, D34862-06. The DDR is produced describing the data delivered either over a pre-defined time period (e.g., all files delivered in the past 15 minutes) or when the number of files delivered reaches a threshold, whichever comes first.</p> <p>The DDR identifies the data that is delivered to a particular delivery destination and the delivery status. The DDR is delivered via the same means and to the same directory destination as the data it is reporting.</p>

3.5.4.1 OPSCON Scenarios

System	Interface specific
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3.5.4.2 Data Transaction and Response

Sender	NPOESS IDP
Receiver	Authorized User
Response	None

3.5.4.3 Data Content, Data Format and Data Mnemonic

Data Content and Data Format	The DDR is an XML formatted file. The details for this format are defined in the NPOESS CDFCB-X, Volume VI, D34862-06.
Data Mnemonic	DP_NU-L00050-000 – Data Delivery Report

3.5.4.4 Protocol and Parameters

Protocol	Interface specific
Parameters	Interface specific

3.5.4.5 Data Volume and Data Rate

Data Volume	Data volume varies based on amount of data requested and sent. The report file size is detailed in NPOESS CDFCB-X Volume VI, D34862-06.
Data Rate	Not applicable

3.5.4.6 Interface Characteristics

Frequency	<p>The DDR frequency is based on two IDP configurable parameters:</p> <ul style="list-style-type: none"> • Specific number of file deliveries to the destination • Specific time interval from last DDR (or when the IDPS Request Server starts) <p>As soon as one of the above parameters is met, a DDR is sent and the limits (number of files and time interval) are reset.</p>
Timeouts	<p>The FTP utility is configured to timeout if the IDP is unable to establish or re-establish a connection within 30 seconds (configurable value). Should the FTP connection fault, the IDP retries the FTP every 30 seconds (configurable value) until the transfer is established for up to 3 (configurable value) attempts. After these retries are made, a message is sent to the IDP Operator indicating the fault. Similar timeout values are used for S-FTP transfers.</p> <p>The configurable values identified here are set at system installation time. Any change to the above values must be approved by the O&S CM Process.</p>
Thresholds	As the specified number of files are delivered or the specified time interval expires.

3.5.4.7 Security

Client Authentication Required	<p>Authentication for this interface is via the infrastructure authentication process</p> <p>Details of the security policies and procedures are defined in the site specific Security Implementation Plan.</p>
Encryption Required	User authentication and session are encrypted via the S-FTP protocol. There is no encryption for the FTP or FCP.

3.5.4.8 Priority and Constraints

Priority There is no prioritization of data or users for this interface, except as handled by transfer protocol

Constraints None

3.5.4.9 Effectivity

Interface Effectivity Interface specific

4.0 RESERVED

5.0 INTERFACE VERIFICATION

Table 5.0-1, Interface Verification Matrix provides a reference for the verification methodology for the logical interfaces defined in this ICD. This methodology is derived from the existing requirement for the respective interface. This matrix links the interface requirement identification number to the interface mnemonic and then indicates the interface system and segment level verification methodology. Each interface verification cites one or more of the verification methods described in the NPOESS Glossary, D35836.

Table 5.0-1, Interface Verification Matrix

			Verification Method	
Requirement ID	I/F Mnemonic	Interface Title	Segment Level	System Level
IDPS029370	X_AD_NP-L00040	Stored Operational Data from CLASS	Inspection	Demonstration
IDPS020964	X_AN_NP-L00010	Quality Assurance Truth Data	Inspection	Demonstration
IDPS040800	X_AN_NP-L00010	Quality Assurance Truth Data	Inspection	Demonstration
IDPS014513	X_AN_NP-L00020	ODAD Retrieval	Inspection	Demonstration
IDPS015545	X_NP_AD-L00030	Requests for Stored Operational Data	Inspection	Demonstration
IDPS029369	X_NP_AD-L00030	Requests for Stored Operational Data	Inspection	Demonstration
C3S060260	X_NP_NU-L00050	Work Request System Extranet Web	Test	Demonstration
C3S060261	X_NP_NU-L00050	Work Request System Extranet Web	Test	Demonstration
C3S060262	X_NP_NU-L00050	Work Request System Extranet Web	Test	Demonstration
C3S060263	X_NP_NU-L00050	Work Request System Extranet Web	Test	Demonstration

			Verification Method	
Requirement ID	I/F Mnemonic	Interface Title	Segment Level	System Level
C3S060264	X_NP_NU-L00050	Work Request System Extranet Web	Test	Demonstration
C3S060265	X_NP_NU-L00050	Work Request System Extranet Web	Test	Demonstration
C3S060266	X_NP_NU-L00050	Work Request System Extranet Web	Test	Demonstration
C3S060267	X_NP_NU-L00050	Work Request System Extranet Web	Test	Demonstration
IDPS020960	X_NP_NU-L00070	IDPS Data Quality Monitoring Ad Hoc Data	Inspection	Demonstration
IDPS020961	X_NP_NU-L00080	IDPS Data Quality Monitoring Reports	Inspection	Demonstration
IDPS020962	X_NP_NU-L00090	IDPS Data Quality Monitoring Messages	Inspection	Demonstration
IDPS029220	X_NP_NU-L00130	Consolidated Data Delivery Report	Inspection	Demonstration,Inspection
IDPS029221	X_NP_NU-L00130	Consolidated Data Delivery Report	Inspection	Demonstration,Inspection
IDPS029222	X_NP_NU-L00130	Consolidated Data Delivery Report	Inspection	Demonstration,Inspection
IDPS029223	X_NP_NU-L00130	Consolidated Data Delivery Report	Inspection	Demonstration,Inspection
IDPS029224	X_NP_NU-L00130	Consolidated Data Delivery Report	Inspection	Demonstration
IDPS029225	X_NP_NU-L00130	Consolidated Data Delivery Report	Inspection	Demonstration,Inspection
IDPS029226	X_NP_NU-L00130	Consolidated Data Delivery Report	Inspection	Demonstration
IDPS029227	X_NP_NU-L00130	Consolidated Data Delivery Report	Inspection	Demonstration
IDPS018690	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
IDPS040200	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
IDPS040300	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection

			Verification Method	
Requirement ID	I/F Mnemonic	Interface Title	Segment Level	System Level
IDPS040301	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
IDPS040400	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
IDPS040500	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
IDPS040600	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
IDPS040900	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
IDPS040940	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
IDPS040960	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
IDPS040980	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	Inspection	Demonstration,Inspection
C3S060280	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S060281	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S060300	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S060301	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S060310	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S060311	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S060320	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S060321	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection

			Verification Method	
Requirement ID	I/F Mnemonic	Interface Title	Segment Level	System Level
C3S060330	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060331	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060340	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060341	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060350	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060360	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060361	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060362	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060365	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060366	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060370	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060371	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060375	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060376	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060380	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060381	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060537	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060539	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060580	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection
C3S060581	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration, Inspection

			Verification Method	
Requirement ID	I/F Mnemonic	Interface Title	Segment Level	System Level
C3S060670	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S060680	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S064020	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S064021	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S064030	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S064031	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S064040	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S064041	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S066040	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
C3S066041	X_NP_NU-LW0010	C3S Extranet Web Server	Test	Demonstration,Inspection
IDPS035931	X_NP_NU-S00090	Storage Area Network File System Management Service	Inspection	Demonstration,Inspection
C3S066180	X_NU_NP-L00020	C3S Orbital Support Data Retrieval	Test	Demonstration
C3S066181	X_NU_NP-L00020	C3S Orbital Support Data Retrieval	Test	Demonstration

6.0 OPERATIONAL AGREEMENTS

The “NPOESS Ancillary Data Service Agreement” captures the details needed for NPOESS to retrieve the data listed in Section 3.3.4, Official Dynamic Ancillary Retrieval Interface from the TOC.

APPENDIX A: SEGMENT INTERFACE REQUIREMENTS

This appendix provides a requirement traceability table extracted from the Systems Level Automation Tool For Engineers (SLATE), to ensure the segments have captured the interface requirements. This table lists all interfaces with their respective segment requirements.

Table A-1, Segment Interface Requirements

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
N/A	No Requirement Needed	X_AD_NP-L00040	Stored Operational Data from CLASS	IDPS029370	The IDPS shall be capable of receiving Stored Operational Data from the LTA, in accordance with interface X_AD_NP-L00040 of the NPOESS Common Interfaces and Services ICD, D34659.
N/A	No Requirement Needed	X_AN_NP-L00010	Quality Assurance Truth Data	IDPS020964	The NESDIS IDP shall be capable of retrieving Cal/Val data from the NSIPS, in accordance with interface X_AN_NP-L00010 of the NPOESS Common Interfaces and Services ICD, D34659.
N/A	No Requirement Needed	X_AN_NP-L00010	Quality Assurance Truth Data	IDPS040800	The IDPS shall be capable of retrieving Quality Assurance Truth Data from external sources, in accordance with interface X_AN_NP-L00010 of the NPOESS Common Interfaces and Services ICD, D34659.

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
N/A	No Requirement Needed	X_AN_NP-L00020	ODAD Retrieval	IDPS014513	The IDPS shall be capable of retrieving Official Dynamic Ancillary Data (ODAD) from external sources, in accordance with interface X_AN_NP-L00020 of the NPOESS Common Interfaces and Services ICD, D34659.
N/A	No Requirement Needed	X_NP_AD-L00030	Requests for Stored Operational Data	IDPS015545	The IDPS shall accept email directions from the LTA on how to retrieve requested Stored Operational Data in accordance with interface X_NP_AD-L00030 of the NPOESS Common Interfaces and Services ICD, D34659.
IDPS029369	The IDPS shall be capable of requesting Stored Operational Data from the LTA, in accordance with interface X_NP_AD-L00030 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_AD-L00030	Requests for Stored Operational Data	N/A	No Requirement Needed
C3S060260	The MMC Element shall provide and maintain a web based Work Request System in accordance with interface X_NP_NU-L00050 of the NPOESS	X_NP_NU-L00050	Work Request System Extranet Web	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	Common Interfaces and Services ICD, D34659.				
N/A	No Requirement Needed	X_NP_NU-L00050	Work Request System Extranet Web	C3S060261	The MMC Element shall be capable of receiving Mission Task Requests from authorized users in accordance with interface X_NP_NU-L00050 of the NPOESS Common Interfaces and Services ICD, D34659.
N/A	No Requirement Needed	X_NP_NU-L00050	Work Request System Extranet Web	C3S060262	The MMC Element shall be capable of receiving Work Requests from authorized users in accordance with interface X_NP_NU-L00050 of the NPOESS Common Interfaces and Services ICD, D34659.
C3S060263	The MMC Element shall have the capability to provide Mission Notices to authorized users in accordance with interface X_NP_NU-L00050 of the NPOESS Common Interfaces and Services ICD,	X_NP_NU-L00050	Work Request System Extranet Web	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	D34659.				
C3S060264	The C3S shall provide and maintain a web based Work Request System, in accordance with interface X_NP_NU-L00050 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00050	Work Request System Extranet Web	N/A	No Requirement Needed
N/A	No Requirement Needed	X_NP_NU-L00050	Work Request System Extranet Web	C3S060265	The C3S shall be capable of receiving Mission Task Requests from authorized users, in accordance with interface X_NP_NU-L00050 of the NPOESS Common Interfaces and Services ICD, D34659.
N/A	No Requirement Needed	X_NP_NU-L00050	Work Request System Extranet Web	C3S060266	The C3S shall be capable of receiving Work Requests from authorized users, in accordance with interface X_NP_NU-L00050 of the NPOESS Common Interfaces and Services ICD, D34659.

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
C3S060267	The C3S shall have the capability to provide Mission Notices to authorized users, in accordance with interface X_NP_NU-L00050 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00050	Work Request System Extranet Web	N/A	No Requirement Needed
IDPS020960	The NESDIS IDP shall be capable of exchanging IDPS Data Quality Monitoring Ad Hoc Data with authorized users, in accordance with interface X_NP_NU-L00070 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00070	IDPS Data Quality Monitoring Ad Hoc Data	N/A	No Requirement Needed
IDPS020961	The NESDIS IDP shall provide IDPS Data Quality Monitoring Reports to authorized users, in accordance with interface X_NP_NU-L00080 of the NPOESS Common Interfaces and	X_NP_NU-L00080	IDPS Data Quality Monitoring Reports	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	Services ICD, D34659.				
IDPS020962	The NESDIS IDP shall be capable of providing IDPS Data Quality Monitoring Messages to authorized users, in accordance with interface X_NP_NU-L00090 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00090	IDPS Data Quality Monitoring Messages	N/A	No Requirement Needed
IDPS029220	The NESDIS IDP shall provide Consolidated Data Delivery Reports to the NESDIS Central, in accordance with interface X_NP_NU-L00130 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00130	Consolidated Data Delivery Report	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
IDPS029221	The AFWA IDP shall provide Consolidated Data Delivery Reports to the AFWA Central, in accordance with interface X_NP_NU-L00130 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00130	Consolidated Data Delivery Report	N/A	No Requirement Needed
IDPS029222	The NAVOCEANO IDP shall provide Consolidated Data Delivery Reports to the NAVOCEANO Central, in accordance with interface X_NP_NU-L00130 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00130	Consolidated Data Delivery Report	N/A	No Requirement Needed
IDPS029223	The FNMOC IDP shall provide Consolidated Data Delivery Reports to the FNMOC Central, in accordance with interface X_NP_NU-L00130 of the NPOESS Common Interfaces and	X_NP_NU-L00130	Consolidated Data Delivery Report	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	Services ICD, D34659.				
IDPS029224	The IDPS shall provide Consolidated Data Delivery Reports to the Ground ISF, in accordance with interface X_NP_NU-L00130 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00130	Consolidated Data Delivery Report	N/A	No Requirement Needed
IDPS029225	The NESDIS IDP shall provide Consolidated Data Delivery Reports to the LTA, in accordance with interface X_NP_NU-L00130 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00130	Consolidated Data Delivery Report	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
IDPS029226	The NESDIS IDP shall provide Consolidated Data Delivery Reports to the SDS, in accordance with interface X_NP_NU-L00130 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00130	Consolidated Data Delivery Report	N/A	No Requirement Needed
IDPS029227	The NESDIS IDP shall provide Consolidated Data Delivery Reports to the P-ASF System, in accordance with interface X_NP_NU-L00130 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-L00130	Consolidated Data Delivery Report	N/A	No Requirement Needed
IDPS018690	The IDPS shall make Processing Coefficient Tables available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	Interfaces and Services ICD, D34659.				
IDPS040200	The IDPS shall make the Mission Schedule available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed
IDPS040300	The IDPS shall make satellite Two Line Element Sets available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
IDPS040301	The IDPS shall make satellite Prediction of Post Maneuver Two Line Element Sets available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed
IDPS040400	The IDPS shall make Mission Notices available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
IDPS040500	The IDPS shall make the IDPS/E-MSDS Data List available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed
IDPS040600	The IDPS shall make the HRD/LRD Monitoring Report available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed
IDPS040900	The IDPS shall make Official Dynamic Ancillary Data available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	NPOESS Common Interfaces and Services ICD, D34659.				
IDPS040940	The IDPS shall make the Satellite Revolution Number available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed
IDPS040960	The IDPS shall make the Spacecraft Configuration Database available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common Interfaces and Services ICD,	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
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D34659.

IDPS040980	The IDPS shall make the VIIRS Calibration F-Tables available to users of the External Mission Support Data Server, in accordance with interface X_NP_NU-LM0020 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LM0020	IDPS External Mission Support Data Server to External Users	N/A	No Requirement Needed
C3S060280	The MMC Element shall make the STA Ad Hoc Telemetry Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD,	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
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D34659.

C3S060281	The C3S shall make the STA Ad Hoc Telemetry Report available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060300	The MMC Element shall make the KSAT Ground Contact Schedule available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD,	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
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D34659.

C3S060301	The C3S shall make the KSAT Ground Contact Schedule available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060310	The MMC Element shall make the HRD/LRD Monitoring Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD,	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
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D34659.

C3S060311	The C3S shall make the HRD/LRD Monitoring Report available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060320	The MMC Element shall make Mission Notices available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD,	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	D34659.				
C3S060321	The C3S shall make Mission Notices available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060330	The MMC Element shall make the Mission Schedule available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD,	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
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D34659.

C3S060331	The C3S shall make the Mission Schedule available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060340	The MMC Element shall make Network Service Operational Statistics available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD,	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	D34659.				
C3S060341	The C3S shall make Network Service Operational Statistics available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060350	The MMC Element shall make the STA SDS Telemetry Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	Interfaces and Services ICD, D34659.				
C3S060360	The MMC Element shall make the System Latency Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060361	The C3S shall make the System Latency Report available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	Services ICD, D34659.				
C3S060362	The MMC Element shall make the Segment Latency Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060365	The MMC Element shall make the System Data Availability Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	NPOESS Common Interfaces and Services ICD, D34659.				
C3S060366	The C3S shall make the System Data Availability Report available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060370	The MMC Element shall make satellite Two Line Element Sets available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	Interfaces and Services ICD, D34659.				
C3S060371	The C3S shall make satellite Two Line Element Sets available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU- LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060375	The MMC Element shall make Prediction of Post Maneuver Two Line Element Sets available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU- LW0010 of the	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
	NPOESS Common Interfaces and Services ICD, D34659.				
C3S060376	The C3S shall make Prediction of Post Maneuver Two Line Element Sets available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
N/A	No Requirement Needed	X_NP_NU-LW0010	C3S Extranet Web Server	C3S060380	The MMC Element shall be capable of retrieving STA Report Requests from the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
N/A	No Requirement Needed	X_NP_NU-LW0010	C3S Extranet Web Server	C3S060381	The C3S shall be capable of retrieving STA Report Requests from the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.
C3S060537	The MMC Element shall make STA Plots available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060539	The C3S shall make STA Plots available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
C3S060580	The MMC Element shall make the STA Report Request Form available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060581	The C3S shall make the STA Report Request Form available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
C3S060670	The MMC Element shall make the CERES Solar Ephemeris Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S060680	The MMC Element shall make the CERES APID Telemetry Files available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
C3S064020	The MMC Element shall make the STA State Checking Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S064021	The C3S shall make the STA State Checking Report available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
C3S064030	The MMC Element shall make the STA Trend Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S064031	The C3S shall make the STA Trend Report available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
C3S064040	The MMC Element shall make the STA Limit Checking Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S064041	The C3S shall make the STA Limit Checking Report available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
C3S066040	The MMC Element shall make the End of Contact Report available to authorized users of the C3S Extranet Web Server in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed
C3S066041	The C3S shall make the End of Contact Report available to authorized users of the C3S Extranet Web Server, in accordance with interface X_NP_NU-LW0010 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-LW0010	C3S Extranet Web Server	N/A	No Requirement Needed

Sender Segment Requirement Number	Sender Segment Requirement Text	I/F Mnemonic	I/F Title	Receiver Segment Requirement Number	Receiver Segment Requirement Text
IDPS035931	The IDPS shall be capable of utilizing the SAN File System Management Service, in accordance with interface X_NP_NU-S00090 of the NPOESS Common Interfaces and Services ICD, D34659.	X_NP_NU-S00090	Storage Area Network File System Management Service	N/A	No Requirement Needed
N/A	No Requirement Needed	X_NU_NP-L00020	C3S Orbital Support Data Retrieval	C3S066180	The C3S shall be capable of retrieving Orbital Support Data from external sources in accordance with interface X_NU_NP-L00020 of the NPOESS Common Interfaces and Services ICD, D34659.
N/A	No Requirement Needed	X_NU_NP-L00020	C3S Orbital Support Data Retrieval	C3S066181	The C3S shall be capable of retrieving Orbital Support Data from external sources, in accordance with interface X_NU_NP-L00020 of the NPOESS Common Interfaces and Services ICD, D34659.

APPENDIX B: INTERFACE AND DATA MNEMONIC MAPPING MATRIX

This appendix maps the logical interfaces to physical interfaces and data mnemonics.

Table B-1, Interface and Data Mnemonic Mapping

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
		X_AN_NP-L00010		
		Quality Assurance Truth Data		
R_MM_MM-P01500	MMC Internet Firewall Interconnect Interface		AN_NP-L40000-001	NCEP GDAS Analysis Files
R_MM_MM-P01505	MMC Internet Interconnect - Primary Interface		AN_NP-L40010-001	AERONET Files
R_MM_MM-P01510	MMC Internet Interconnect - Secondary Interface		AN_NP-L40020-001	ASOS Files
R_NE_NE-P00050	NESDIS LAN Core - Primary Interface		AN_NP-L40020-002	MODIS/Terra Cloud Mask
R_NE_NE-P00055	NESDIS LAN Core - Secondary Interface		AN_NP-L40110-001	ACARS Files
T_DP_C3-P00010	NESDIS IDPS/DQM Area Workstations - Primary Interface		AN_NP-L40130-001	Ship/Buoy Files
T_DP_C3-P00015	NESDIS IDPS/DQM Area Workstation - Secondary Interface		AN_NP-L40150-001	Ozone Sonde Network Files
X_MM_NP-P00020	MMC Internet Firewall Interface		AN_NP-L40170-001	RAOB Files
			AN_NP-L40190-002	MODIS/Terra Sea Surface Temperature

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
			AN_NP-L40210-001	BSRN Files
			AN_NP-L40350-001	AMSU-A Brightness Temperature
		X_NP_NU-LW0010		
		C3S Extranet Web Server to Authorized Users		
R_MM_MM-P00605	MMC IDMZ External EM Web Server - Primary Interface		C3_NU-L00060-060	System Data Availability Report
R_MM_MM-P00650	MMC IDMZ Blade Chassis Interface		C3_NU-L00060-150	Store Telemetry Analysis Report Request Form
R_MM_MM-P01625	MMC Internet DMZ Interface		C3_NU-L00070-070	Mission Schedule
X_MM_NP-P00020	MMC Internet Firewall Interface		C3_NU-L00080-080	System Latency Report
			C3_NU-L00081-081	Segment Latency Report
			C3_NU-L00100-100	Two Line Element Sets
			C3_NU-L00100-101	Prediction of Post Maneuver Two Line Element Sets
			C3_NU-LW0010-001	End of Contact Report
			C3_NU-LW2060-000	Mission Notices
			C3_NU-LW2070-000	Network Service Operational Statistics
			C3_NU-LW2080-000	High Data Rate/Low Data Rate Monitoring Report

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
			C3_NU-LW2090-000	Store Telemetry Analysis Science Data Segment Telemetry Report
			C3_NU-LW2100-000	Stored Telemetry Analysis Limit Checking Report
			C3_NU-LW2110-000	Stored Telemetry Analysis Ad Hoc Telemetry Report
			C3_NU-LW2120-000	Stored Telemetry Analysis Trend Report
			C3_NU-LW2125-000	Store Telemetry Analysis State Checking Report Format
			C3_NU-LW2130-000	Stored Telemetry Analysis Plots
			C3_NU-LW2160-000	Ground Contact Schedule (KSAT)
			C3_NU-LW2170-000	CERES APID Telemetry Files
			C3_NU-LW2170-001	CERES Solar Ephemeris
			C3_NU-L00040-040	Spacecraft Configuration Database Update
		X_NP_NU-LM0020		
		IDPS External Mission Support Data Server to External Users		
R_MM_MM-P00635	MMC IDMZ External MSDS - Primary Interface		AN_NP-L10000-030	NCEP GFS Numerical Weather Prediction File - 3 hour forecast
R_MM_MM-P00650	MMC IDMZ Blade Chassis Interface		AN_NP-L10000-060	NCEP GFS Numerical Weather Prediction File - 6 hour forecast

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
R_MM_MM-P01625	MMC Internet DMZ Interface		AN_NP-L10000-090	NCEP GFS Numerical Weather Prediction File - 9 hour forecast
X_MM_NP-P00020	MMC Internet Firewall Interface		AN_NP-L10000-120	NCEP GFS Numerical Weather Prediction File - 12 hour forecast
			AN_NP-L10000-150	NCEP GFS Numerical Weather Prediction - 15 hour forecast
			AN_NP-L10000-180	NCEP GFS Numerical Weather Prediction - 18 hour forecast
			AN_NP-L10000-210	NCEP GFS Numerical Weather Prediction - 21 hour forecast
			AN_NP-L10000-240	NCEP GFS Numerical Weather Prediction - 24 hour forecast
			AN_NP-L10015-030	Navy Aerosol Analysis and Prediction System (NAAPS) - 3hr forecast
			AN_NP-L10015-060	NAAPS - 6 hour forecast
			AN_NP-L10015-090	NAAPS - 9 hour forecast
			AN_NP-L10015-120	NAAPS - 12 hour forecast
			AN_NP-L10015-150	NAAPS - 15 hour forecast
			AN_NP-L10015-180	NAAPS - 18 hour forecast
			AN_NP-L10015-210	NAAPS - 21 hour forecast
			AN_NP-L10015-240	NAAPS - 24 hour forecast

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
			AN_NP-L10330-003	Earth Orientation - Finals2000A
			C3_NU-L00030-030	Revolution Number
			C3_NU-L00040-040	Spacecraft Configuration Database Update
			C3_NU-L00070-070	Mission Schedule
			C3_NU-L00100-100	Two Line Element Sets
			C3_NU-L00100-101	Prediction of Post Maneuver Two Line Element Sets
			C3_NU-LW2060-000	Mission Notices
			C3_NU-LW2080-000	High Data Rate/Low Data Rate Monitoring Report
			DP_NU-LM2020-001	Processing Coefficients Table (Ephemeral PCs)
			DP_NU-LM2040-000	External Mission Support Data Server Data List
			NP_NU-LM0233-031	VIIRS F Table Processing Coefficients
		X_NP_NU-L00050		
		Work Request System Extranet Web		
R_MM_MM-P00605	MMC IDMZ External EM Web Server - Primary Interface		C3_NU-LW2060-000	Mission Notices
R_MM_MM-P00650	MMC IDMZ Blade Chassis Interface		C3_NU-LW2060-001	Mission Notice Email Messages

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
R_MM_MM-P01625	MMC Internet DMZ Interface			
X_MM_NP-P00020	MMC Internet Firewall Interface			
		X_NP_AD-L00030		
		Request for Stored Operational Data		
R_AF_AF-P00020	AFWA LAN Core - Primary Interface		NA_NA-L00060-000	Formats defined by CLASS
R_AF_AF-P00025	AFWA LAN Core - Secondary Interface			
R_AF_AF-P00030	AFWA WAN Firewall - Primary Interface			
R_AF_AF-P00035	AFWA WAN Firewall - Secondary Interface			
R_C3_C3-P00170	Central C3S IT Specialist Workstation Interface			
R_FN_FN-P00020	FNMOCLAN Core - Primary Interface			
R_FN_FN-P00025	FNMOCLAN Core - Secondary Interface			
R_FN_FN-P00030	FNMOCLAN Firewall - Primary Interface			
R_FN_FN-P00035	FNMOCLAN Firewall - Secondary Interface			
R_MM_MM-P00185	MMC OPS Workstation Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
R_MM_MM-P01500	MMC Internet Firewall Interconnect Interface			
R_MM_MM-P01505	MMC Internet Interconnect - Primary Interface			
R_MM_MM-P01510	MMC Internet Interconnect - Secondary Interface			
R_MM_MM-P01525	MMC Core - Primary Interface			
R_MM_MM-P01530	MMC Core - Secondary Interface			
R_MM_MM-P01535	MMC WAN Firewall - Primary Interface			
R_MM_MM-P01540	MMC WAN Firewall - Secondary Interface			
R_NE_NE-P00050	NESDIS LAN Core - Primary Interface			
R_NE_NE-P00055	NESDIS LAN Core - Secondary Interface			
R_NV_NV-P00020	NAVO LAN Core - Primary Interface			
R_NV_NV-P00025	NAVO LAN Core - Secondary Interface			
R_NV_NV-P00030	NAVO WAN Firewall- Primary Interface			
R_NV_NV-P00035	NAVO WAN Firewall - Secondary Interface			
T_DP_C3-P00010	NESDIS IDPS/DQM Area Workstations - Primary Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
T_DP_C3-P00015	NESDIS IDPS/DQM Area Workstation - Secondary Interface			
T_DP_C3-P00060	Central IDPS Operator Workstation - Primary Interface			
T_DP_C3-P00065	Central IDPS Operator Workstation - Secondary Interface			
X_MM_NP-P00020	MMC Internet Firewall Interface			
		X_AD_NP-L00040		
		Stored Operational Data from CLASS		
R_AF_AF-P00020	AFWA LAN Core - Primary Interface		NA_NA-L00070-000	Requested stored operational data from CLASS – Reference formats in CDFCB-X, D34862
R_AF_AF-P00025	AFWA LAN Core - Secondary Interface			
R_AF_AF-P00030	AFWA WAN Firewall - Primary Interface			
R_AF_AF-P00035	AFWA WAN Firewall - Secondary Interface			
R_C3_C3-P00170	Central C3S IT Specialist Workstation Interface			
R_FN_FN-P00020	FNMOC LAN Core - Primary Interface			
R_FN_FN-P00025	FNMOC LAN Core - Secondary Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
R_FN_FN-P00030	FNMOC WAN Firewall - Primary Interface			
R_FN_FN-P00035	FNMOC WAN Firewall - Secondary Interface			
R_MM_MM-P01500	MMC Internet Firewall Interconnect Interface			
R_MM_MM-P01505	MMC Internet Interconnect - Primary Interface			
R_MM_MM-P01510	MMC Internet Interconnect - Secondary Interface			
R_MM_MM-P01535	MMC WAN Firewall - Primary Interface			
R_MM_MM-P01540	MMC WAN Firewall - Secondary Interface			
R_NE_NE-P00050	NESDIS LAN Core - Primary Interface			
R_NE_NE-P00055	NESDIS LAN Core - Secondary Interface			
R_NV_NV-P00020	NAVO LAN Core - Primary Interface			
R_NV_NV-P00025	NAVO LAN Core - Secondary Interface			
R_NV_NV-P00030	NAVO WAN Firewall- Primary Interface			
R_NV_NV-P00035	NAVO WAN Firewall - Secondary Interface			
T_DP_C3-P00010	NESDIS IDPS/DQM Area Workstations - Primary Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
T_DP_C3-P00015	NESDIS IDPS/DQM Area Workstation - Secondary Interface			
T_DP_C3-P00060	Central IDPS Operator Workstation - Primary Interface			
T_DP_C3-P00065	Central IDPS Operator Workstation - Secondary Interface			
X_MM_NP-P00020	MMC Internet Firewall Interface			
		X_NP_NU-L00070		
		IDPS Data Quality Monitoring Ad Hoc Data		
R_MM_MM-P00495	MMC MDMZ EM Mail Server - Primary Interface		NA_NA-L00040-000	No restrictions on file format or content
R_MM_MM-P00500	MMC MDMZ EM Mail Server - Secondary Interface			
R_MM_MM-P00510	MMC MDMZ Domain Controller / DNS - Primary Interface			
R_MM_MM-P00515	MMC MDMZ Domain Controller / DNS - Secondary Interface			
R_MM_MM-P00600	MMC IDMZ EM Mail Proxy Server Interface			
R_MM_MM-P00645	MMC MDMZ Blade Chassis Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
R_MM_MM-P00650	MMC IDMZ Blade Chassis Interface			
R_MM_MM-P01500	MMC Internet Firewall Interconnect Interface			
R_MM_MM-P01505	MMC Internet Interconnect - Primary Interface			
R_MM_MM-P01510	MMC Internet Interconnect - Secondary Interface			
R_MM_MM-P01625	MMC Internet DMZ Interface			
R_NE_NE-P00050	NESDIS LAN Core - Primary Interface			
R_NE_NE-P00055	NESDIS LAN Core - Secondary Interface			
T_DP_C3-P00010	NESDIS IDPS/DQM Area Workstations - Primary Interface			
T_DP_C3-P00015	NESDIS IDPS/DQM Area Workstation - Secondary Interface			
T_DP_C3-P00175	NESDIS IDPS/DQM Server - Primary Interface			
T_DP_C3-P00180	NESDIS IDPS/DQM Server - Secondary Interface			
X_MM_NP-P00020	MMC Internet Firewall Interface			
		X_NP_NU-L00080		
		IDPS Data Quality Monitoring Reports		

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
R_MM_MM-P00495	MMC MDMZ EM Mail Server - Primary Interface		DP_NU-L00080-002	DQM Repository Reports
R_MM_MM-P00500	MMC MDMZ EM Mail Server - Secondary Interface		DP_NU-L00080-003	DQM Statistical Reports
R_MM_MM-P00510	MMC MDMZ Domain Controller / DNS - Primary Interface		DP_NU-L00080-004	DQM Trending Reports
R_MM_MM-P00515	MMC MDMZ Domain Controller / DNS - Secondary Interface		DP_NU-L00080-005	DQM Ad-Hoc Reports
R_MM_MM-P00600	MMC IDMZ EM Mail Proxy Server Interface			
R_MM_MM-P00645	MMC MDMZ Blade Chassis Interface			
R_MM_MM-P00650	MMC IDMZ Blade Chassis Interface			
R_MM_MM-P01500	MMC Internet Firewall Interconnect Interface			
R_MM_MM-P01505	MMC Internet Interconnect - Primary Interface			
R_MM_MM-P01510	MMC Internet Interconnect - Secondary Interface			
R_MM_MM-P01625	MMC Internet DMZ Interface			
R_NE_NE-P00050	NESDIS LAN Core - Primary Interface			
R_NE_NE-P00055	NESDIS LAN Core - Secondary Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
T_DP_C3-P00010	NESDIS IDPS/DQM Area Workstations - Primary Interface			
T_DP_C3-P00015	NESDIS IDPS/DQM Area Workstation - Secondary Interface			
T_DP_C3-P00175	NESDIS IDPS/DQM Server - Primary Interface			
T_DP_C3-P00180	NESDIS IDPS/DQM Server - Secondary Interface			
X_MM_NP-P00020	MMC Internet Firewall Interface			
		X_NP_NU-L00090		
		IDPS Data Quality Monitoring Messages		
R_MM_MM-P00495	MMC MDMZ EM Mail Server - Primary Interface		DP_NU-L00090-001	Data Quality Monitoring Messages
R_MM_MM-P00500	MMC MDMZ EM Mail Server - Secondary Interface			
R_MM_MM-P00510	MMC MDMZ Domain Controller / DNS - Primary Interface			
R_MM_MM-P00515	MMC MDMZ Domain Controller / DNS - Secondary Interface			
R_MM_MM-P00600	MMC IDMZ EM Mail Proxy Server Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
R_MM_MM-P00645	MMC MDMZ Blade Chassis Interface			
R_MM_MM-P00650	MMC IDMZ Blade Chassis Interface			
R_MM_MM-P01500	MMC Internet Firewall Interconnect Interface			
R_MM_MM-P01505	MMC Internet Interconnect - Primary Interface			
R_MM_MM-P01510	MMC Internet Interconnect - Secondary Interface			
R_MM_MM-P01625	MMC Internet DMZ Interface			
R_NE_NE-P00050	NESDIS LAN Core - Primary Interface			
R_NE_NE-P00055	NESDIS LAN Core - Secondary Interface			
T_DP_C3-P00010	NESDIS IDPS/DQM Area Workstations - Primary Interface			
T_DP_C3-P00015	NESDIS IDPS/DQM Area Workstation - Secondary Interface			
T_DP_C3-P00175	NESDIS IDPS/DQM Server - Primary Interface			
T_DP_C3-P00180	NESDIS IDPS/DQM Server - Secondary Interface			
X_MM_NP-P00020	MMC Internet Firewall Interface			
		X_AN_NP-L00020		

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
		Official Dynamic Ancillary Data Retrieval		
R_MM_MM-P00635	MMC IDMZ External MSDS - Primary Interface		AN_NP-L10000-030	NCEP GFS Numerical Weather Prediction File - 3 hour forecast
R_MM_MM-P00650	MMC IDMZ Blade Chassis Interface		AN_NP-L10000-060	NCEP GFS Numerical Weather Prediction File - 6 hour forecast
R_MM_MM-P01625	MMC Internet DMZ Interface		AN_NP-L10000-090	NCEP GFS Numerical Weather Prediction File - 9 hour forecast
X_MM_NP-P00020	MMC Internet Firewall Interface		AN_NP-L10000-120	NCEP GFS Numerical Weather Prediction File - 12 hour forecast
			AN_NP-L10000-150	NCEP GFS Numerical Weather Prediction - 15 hour forecast
			AN_NP-L10000-180	NCEP GFS Numerical Weather Prediction - 18 hour forecast
			AN_NP-L10000-210	NCEP GFS Numerical Weather Prediction - 21 hour forecast
			AN_NP-L10000-240	NCEP GFS Numerical Weather Prediction - 24 hour forecast
			AN_NP-L10015-030	Navy Aerosol Analysis and Prediction System (NAAPS) - 3hr forecast
			AN_NP-L10015-060	NAAPS - 6 hour forecast

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
			AN_NP-L10015-090	NAAPS - 9 hour forecast
			AN_NP-L10015-120	NAAPS - 12 hour forecast
			AN_NP-L10015-150	NAAPS - 15 hour forecast
			AN_NP-L10015-180	NAAPS - 18 hour forecast
			AN_NP-L10015-210	NAAPS - 21 hour forecast
			AN_NP-L10015-240	NAAPS - 24 hour forecast
			AN_NP-L10330-003	Earth Orientation - Finals2000A
			AN_NP-L20000-030	NOGAPS Numerical Weather Prediction File - 3 hour forecast
			AN_NP-L20000-060	NOGAPS Numerical Weather Prediction File - 6 hour forecast
			AN_NP-L20000-090	NOGAPS Numerical Weather Prediction File - 9 hour forecast
			AN_NP-L20000-120	NOGAPS Numerical Weather Prediction File - 12 hour forecast
			AN_NP-L20000-150	NOGAPS Numerical Weather Prediction File - 15 hour forecast
			AN_NP-L20000-180	NOGAPS Numerical Weather Prediction File - 18 hour forecast
			AN_NP-L20000-210	NOGAPS Numerical Weather Prediction File - 21 hour forecast

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
			AN_NP-L20000-240	NOGAPS Numerical Weather Prediction File - 24 hour forecast
		X_NP_NU-L00130		
		Consolidated Data Delivery Report		
R_AF_AF-P00020	AFWA LAN Core - Primary Interface		DP_NU-L00015-000	Consolidated Data Delivery Reports
R_AF_AF-P00025	AFWA LAN Core - Secondary Interface			
R_AF_AF-P00030	AFWA WAN Firewall - Primary Interface			
R_AF_AF-P00035	AFWA WAN Firewall - Secondary Interface			
R_AU_AU-P00010	GISF Firewall to WAN Interface			
R_AU_AU-P00020	GISF Firewall to Core Interface			
R_FN_FN-P00020	FNMOE LAN Core - Primary Interface			
R_FN_FN-P00025	FNMOE LAN Core - Secondary Interface			
R_FN_FN-P00030	FNMOE WAN Firewall - Primary Interface			
R_FN_FN-P00035	FNMOE WAN Firewall - Secondary Interface			
R_MM_MM-P01535	MMC WAN Firewall - Primary Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
R_MM_MM-P01540	MMC WAN Firewall - Secondary Interface			
R_NE_NE-P00030	NESDIS Central Core - PST/NSIPS Data – Primary Interface			
R_NE_NE-P00035	NESDIS Central Core - PST/NSIPS Data – Secondary Interface			
R_NE_NE-P00040	NESDIS Central Core - Central Users/SDS/CLASS Data – Primary Interface			
R_NE_NE-P00045	NESDIS Central Core - Central Users/SDS/CLASS Data – Secondary Interface			
R_NE_NE-P00050	NESDIS LAN Core - Primary Interface			
R_NE_NE-P00055	NESDIS LAN Core - Secondary Interface			
R_NE_NE-P00080	NESDIS Interconnect Switch to NESDIS LAN Firewalls - Primary Interface			
R_NE_NE-P00085	NESDIS Interconnect Switch to NESDIS LAN Firewalls - Secondary Interface			
R_NE_NE-P00095	NESDIS PST Server Switch to NESDIS LAN Firewalls - Primary Interface			
R_NE_NE-P00100	NESDIS PST Server Switch to NESDIS LAN Firewalls - Secondary Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
R_NE_NE-P00105	NESDIS PST Workstation Switches to NESDIS LAN Firewalls - Primary Interface			
R_NE_NE-P00110	NESDIS PST Workstation Switches to NESDIS LAN Firewalls - Secondary Interface			
R_NV_NV-P00020	NAVO LAN Core - Primary Interface			
R_NV_NV-P00025	NAVO LAN Core - Secondary Interface			
R_NV_NV-P00030	NAVO WAN Firewall- Primary Interface			
R_NV_NV-P00035	NAVO WAN Firewall - Secondary Interface			
T_C3_NP-P00005	P-ASF Landing Zone Server - Primary Interface			
T_DP_C3-P00030	Central IDPS/DDS Server - Primary Interface			
T_DP_C3-P00035	Central IDPS/DDS Server - Secondary Interface			
T_NE_NP-P00010	NESDIS NPOESS LAN Interface to NSIPS			
X_DP_AF-P00010	AFWA IDPS/DDS to AFWA Central SAN - Interface			
X_DP_FN-P00010	FNMOC IDPS/DDS to FNMOC Central SAN - Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
X_DP_NE-P00010	NESDIS IDPS/DDS to NESDIS Central ESPC SAN - Interface			
X_DP_NV-P00010	NAVO IDPS/DDS to NAVO Central SAN - Interface			
X_NE_NP-P00010	NESDIS NPOESS LAN Interface to CLASS - Primary Interface			
X_NE_NP-P00015	NESDIS NPOESS LAN Interface to CLASS - Secondary Interface			
X_NE_NP-P00020	NESDIS NPOESS LAN Interface to NESDIS Central Network Providing Connectivity to NASA SDS - Primary Interface			
X_NE_NP-P00025	NESDIS NPOESS LAN Interface to NESDIS Central Network Providing Connectivity to NASA SDS - Secondary Interface			
T_C3_NP-P00005	P-ASF Landing Zone Server – Primary			
T_C3_NP-P00010	P-ASF Landing Zone Server - Secondary			
T_C3_NP-P00015	P-ASF Mission Server - Primary			
T_C3_NP-P00020	P-ASF Mission Server - Secondary			
T_C3_NP-P00025	P-ASF Database and Storage Server - Primary			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
T_C3_NP-P00030	P-ASF Database and Storage Server - Secondary			
		X_NP_NU-S00090		
		SAN File System Management Service		
R_AF_AF-P00010	AFWA Central Core - Primary Interface		NA_NA-S00020-000	Service – Format per COTS product used or industry standards
R_AF_AF-P00015	AFWA Central Core - Secondary Interface			
R_FN_FN-P00010	FNMOC Central Core - Primary Interface			
R_FN_FN-P00015	FNMOC Central Core - Secondary Interface			
R_MM_MM-P00185	MMC OPS Workstation Interface			
R_NE_NE-P00040	NESDIS Central Core - Central Users/SDS/CLASS Data – Primary Interface			
R_NE_NE-P00045	NESDIS Central Core - Central Users/SDS/CLASS Data – Secondary Interface			
R_NV_NV-P00010	NAVO Central Core - Primary Interface			
R_NV_NV-P00015	NAVO Central Core - Secondary Interface			
T_DP_C3-P00040	Central IDPS/DDS Server - Management Interface			

Physical Interface	Physical Name	Logical Interface Logical Name	Data Mnemonic	Data Name
T_DP_C3-P00045	Central IDPS Processing Server - Management Interface			
X_AF_NP-P00040	AFWA Central Use - Primary Interface			
X_AF_NP-P00045	AFWA Central User - Secondary Interface			
X_FN_NP-P00040	FNMOCC Central User - Primary Interface			
X_FN_NP-P00045	FNMOCC Central User - Secondary Interface			
X_NE_NP-P00030	NESDIS NPOESS LAN Interface to NESDIS Central Users - Primary Interface			
X_NE_NP-P00035	NESDIS NPOESS LAN Interface to NESDIS Central Users - Secondary Interface			
X_NE_NP-P00040	NESDIS Central StorNext - Primary Interface			
X_NE_NP-P00045	NESDIS Central StorNext - Secondary Interface			
X_NV_NP-P00040	NAVO Central User - Primary Interface			
X_NV_NP-P00045	NAVO Central User - Secondary Interface			

APPENDIX C: DOCUMENT-SPECIFIC ACRONYM LIST

All acronyms are listed and identified in the NPOESS Acronyms, D35838.

APPENDIX D: RESERVED